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Male high school athletes who have had experience participating with females in an interscholastic sport situation, male high school athletes who have had no such experience, and male high school non-athletes were compared as to attitudinal inclinations concerning girls participating on boys' interscholastic teams in non-contact sports. A Semantic Differential Attitude Test, consisting of three major concepts--female athletic teammate, female athletic opponent, and female athlete--was administered to a total of 322 subjects from the New York City Public High School system. Within group and between group comparisons were made in addition to comparisons as to sport, age, individual playing experience with girls, and general favorable attitude regarding girls' participation on boys' interscholastic teams. The statistical process of analysis of variance supported the following results: (1) male high school athletes had more favorable attitude than non-athletes towards girls playing on boys' interscholastic teams; (2) athletes with more experience with female athletes in an interscholastic situation had the most favorable attitude, followed by athletes with no experience; (3) there was no difference in attitudes of groups when comparing age, type of sport or particular individual playing experience with females; (4) the concept of female athletic teammate was more favorable than concepts of female athletic opponent and female athlete, respectively, and (5) athletes were slightly in favor of having girls participate on boys' interscholastic teams, while non-athletes were neutral in their position.

The results indicated a positive attitude by male high school athletes towards girls participating on boys' inter-scholastic teams.

ATTITUDES OF SELECTED HIGH SCHOOL BOYS TOWARDS GIRLS PLAYING ON BOYS' INTERSCHOLASTIC TEAMS

by

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CHAPTER I

INTRODUCTION

> For maleness in America is not absolutely defined, it has to be kept and re-earned every day, and one essential element in the definition is beating women in every game that both sexes play, in every activity in which both sexes engage.
>
> Margaret Mead
> Male and Female

"Maleness" and "Masculinity" are two words which have been defined, evaluated, summarized, analyzed, finally synthesized and digested by most Americans--especially males. Within this process, which is called socialization, the essense of what man is or what he is to be, is discerned.

Yet, society, in all of its wisdom, and along with its fears, has failed to provide the real answer to what maleness is. What it has provided, instead, is what society believes a male should be. Any man not meeting societal expectations will find himself neatly labeled and classified accordingly to the degree of his social role.

In formulating stereotypes, obviously there is no room for the non-conformist, the individual who for some reason does not meet societal standards.

It is unfortunate with any stereotype which is allowed to exist, that in time those who are stereotyped believe that they must

have those certain "particular" traits society states that they have and they perform accordingly.

Myron Benton in The American Male accentuated this phenomenon by asserting that "one thing is self-evident. Both masculine and feminine stereotypes have hampered the development of personality irrespective of sex." (4:39) Thus, society in its endeavors to construct the "ideal" male and female, has in effect interfered with true gender roles.

If the concepts of masculinity and femininity were to be redefined (if they could be defined at all), then it is the male who will meet with the most difficulty in accepting the new definition. Generally, he has only known those behavioral patterns which were classified as masculine.

Athletics and all of their concomitant "masculine" values of strength, endurance, agility and power are a proving ground for the masculinity of males. "For a woman, the sport /may be/ simply a leisure-time activity, something she engages in for fun. Fundamentally, it can't be for the man. His masculinity goes on the line." (4:60)

Athletics provide the male with two basic fundamentals: a masculine image and "masculine heroes after whom they can model themselves." (19:120)

Thus, we can see a pattern forming: society determines what masculinity is; it then determines that athletics is a powerful demonstration of that masculinity. The conclusion is that males who participate in athletics are masculine.

Males who do not participate in athletics directly can maintain their masculine image by participating vicariously: being a spectator. But males who have no interest in athletics either directly or indirectly are often suspect in the society of the United States.

The association of masculinity and sport proposes a perplexing problem. What will happen when a female engages in a sport in which the majority or all of the other participants are male?

This phenomenon has been occurring in the professional world of sports. Tradition has been cast aside in horseracing with several female jockeys; football, with a female place-kick holder; and baseball, with a female umpire, just to mention a few.

Females have also moved into the area of non-professional athletics as well. The reaction to this encroachment of "male territory" has been varied.

Roberta Bengay, 23 years old, ran, uninvited, in the Boston Marathon and beat 290 men out of the 415 males entered in the annual event. One male official reacted by stating that: "Mrs. Bengay did not run in the Boston Marathon. . . she merely covered the same route as the official race while it was in progress." (27:71)

Sandra Arrington is the first female diver on the Howard University team. Although the other members of her team admire her "ability" and "guts," she has been harassed by spectators from time to time. She feels that by beating males, "they might get an inferiority complex." (36:74)

Most of the mixed competition (females on male teams) has occurred among athletes who are college age or over. The possibility of females playing on male teams at a younger age has led to further controversy and inquiry into the possible effects of such competition.

These inquiries are now academic. The reality of the situation exists in the state of New York. New York State has an interscholastic program which permits qualified females to play on male teams in certain classified sports.

The program has sprung from a sixteen-month experiment which was initiated by a threatened suit from Judy Barash, a 17 year old girl whose high school did not have a girls' interscholastic tennis team. Because of this threat of lawsuit, the aid of legislators and petitions from parents and students, the New York State Commissioner, Dr. James Allen, agreed to an experiment which would determine if "such coed [emphasis author's] activity [was] feasible." (56:29)

Those sports listed by the New York Education Department as non-contact were the activities that the girls would be allowed to participate in with the male athletes. Those non-contact sports were: swimming, golf, tennis, bowling, gymnastics, cross country, track, fencing, riflery and skiing. (56:48)

One hundred high schools in the upperstate New York area volunteered to participate in the study which enforced the following precautions: only the highly skilled girl unable to find "comparable challenge on girls' teams" could participate (47:215),

and physicians were employed to determine if there were any harmful effects either physically or emotionally. (46)

Although the final results and statistical evidence of the study have not been published, reports indicate that most participants including administrators, coaches and parents were favorable to this type of competition. (46, 47, 48, 55, 56, 57)

As a result of this experiment, New York State allowed girls to participate on boys' teams, but it was not until 1971, a year later, that the results of the New York State experiment would cause a major controversy in New York City.

New York City, up until 1971, did not allow girls to participate on boys' interscholastic teams, and the Public School Athletic League, the governing body for all sports in the New York City public schools, had no intention of allowing this female infiltration. Both branches of the PSAL, women and men, were diametrically opposed to such an arrangement. (58:57)

Phyllis Graber, a 16 year old tennis player who was denied a place on her Jamaica High School Tennis team (no school in the city had tennis interscholastics for girls), precipitated the decision which caused the controversy.

Chancellor Harvey Scribner, backed by the New York State Education Department, in the face of a lawsuit from Ms. Graber, decided to allow girls to participate on boys' teams in New York City in non-contact sports: archery, badminton, bowling, fencing, golf, gymnastics, riflery, shuffleboard, skiing, swimming, diving, table tennis, tennis, and track and field. (57, 58, 59)

Objections to this decision were wide ranged. Physical education chairmen of departments in the high schools felt it to be "unwise" and "undesirable" to allow such competition. (57) Irwin Tobin, director of the Bureau of Health and Physical Education in New York City, felt that "the answer to the admitted need for more athletic opportunities for girls was to provide more programs for girls." (44:5, 57)

Ms. Elizabeth Eastman, an Education Department attorney,

> . . . raised the question of liability against the schools in the event of the girls' injury, citing as precedent court cases where injury occurred in an athletic contest involving an unequal matching of opponents. (3:2, 55)

Other educators felt that females playing on male teams was not a socially acceptable type of competition, especially if the girl beat the boy. (46, 47, 57) It was also believed that girls were not physically capable of competing against boys in such competition. (57) (Julia Barash had beaten all eleven opponents she faced in competition.) It was also considered undesirable to have a male coach for a female athlete. (54)

All of the controversy was further ignited by the fact that the girls' interscholastic program was only in its third year (after a forty-year absence from the city) and was progressing at a rapid pace.

In the final analysis, the greatest fear was the fear of women physical educators, that if girls were allowed to play on boys' teams the existence of the girls interscholastic program was threatened. (58)

It was in the wake of this controversy that this study concerning attitudes of boys about girls participating on their teams was conceived.

It was the hope of the investigator that this study would shed some light on at least one aspect of the controversy: the effects of this type of competition on the male.

Many of the questions are still left unanswered: Can high school girls compete successfully against boys in an interscholastic contest? Will such competition foster duplication to a greater extent in professional and high level amateur athletics? How will this type of competition affect the societal structure which now exists concerning the male and female?

No one study could answer all of the questions or solve all of the problems. Instead, society must look to the future and seek the answers. And it is hoped, that society in all of its wisdom and with all of its faults, will be able to adjust to the changes whatever they may bring so that both the male and the female may strive for the individual potential that they are capable of reaching.

CHAPTER II

STATEMENT OF THE PROBLEM

The purpose of this study was to investigate the attitudes of selected high school boys towards girls playing on boys' interscholastic teams.

Subjects for this study were athletes who participated in non-contact sports-interscholastic teams and non-athletes from the New York City Public School system.

DEFINITION OF TERMINOLOGY

For the purpose of this study, the following definitions were established:

Athlete:	One who has participated in at least ONE interscholastic sport on the high school level (grades 10-12).
Non-athlete:	One who has not participated in any interscholastic sport on the high school level.
Non-contact sport:	A sport in which little if any contact occurs between the bodies of the opposing players due to the nature or rules of the sport.
Interscholastics:	Series of scheduled games with like teams consisting of groups of players who have been trained or coached. (30, 54)

CHAPTER III

REVIEW OF LITERATURE

Male and Female Role Identity

> Society sets up its rules for what constitutes masculinity and femininity.
>
> Myron Benton
> The American Male

Every society, regardless of how well or poorly it is defined, sets up behavioral patterns and a social "hierarchy" which its members must follow. (3:13). It is within the boundaries of these societal mores that an individual ascertains or is directed towards the accepted patterns of behavior and learning.

There is no doubt, Benton claimed, that if allowed to progress without this societal influence ". . . human beings [would] have an enormous range of possibilities in terms of traits and in the ability to play roles of all kinds." (4:50)

But such achievement is socially curtailed through differentiation of individuals by age, education, race and most acutely by sex. Jobs, clothing, toys and games are only some of the things defined as being either masculine or feminine in nature. (4:6)

The concepts of masculinity and femininity have been restricted by both the biological and the societal functions of each. (13) Thus, stated Amundsen, one's "sex role identity is

developed according to how well his biological and psychological characteristics correspond to his or her concept of the ideal male or female," (2:116) and the ideal male and female have been determined by society. Generally, a woman or man must act within this societal boundary which will allow compatability with the opposite sex. (12)

This socialization process takes place early in life allowing the male and female infants to develop an "awareness of sex identity" and "cultural expectation" that will be reinforced later in life. (6:12)

Stereotyping traits, jobs, characteristics as either masculine or feminine have in time tended to mask the individuality of the man or woman. Talent which could be tapped has been lost through the failure to "allow for individual differences" or crossing of the imaginary line which divides the sexes. (4:18)

The phenomenon of stereotyping and societal and cultural expectations has led to the

> crux of male 'superiority': society has arbitrarily stated that there were things the woman was permitted to do; then it proclaimed the male superior and the female inferior precisely because she could not do the things she had been forbidden to do in the first place! (4:98)

Inherent in this philosophy, stated Margaret Mead, is the strong belief that certain careers, sports, characteristics and traits are exclusively for the male, and the female has no right to desire them. (11:2)

Kirsten Amundsen summed it up by saying that women must not, therefore, "compete on an equal basis with men in the fields of

activity now dominated by the 'stronger' sex. (2:13) Most women liberationist literature indicated that in man's endeavor to prove himself the superior sex, he has stressed both the biological and sociological aspects of the woman; thus, establishing the paradox of whether these biological and social traits are inherent in the woman or man-made to prove his superiority. (2, 4, 12) Perhaps some credence can be lent to the latter belief when the character traits believed to be inherent in the male and the female are examined.

While the male is encouraged to be inquisitive, assertive, exploratory and rebellious, these traits are discouraged in the female. Independence, drive, strength, power, aggressiveness and intelligence are fostered in the male, while dependence, conformity, fragility and intuition are sponsored for the female. The female is allowed to be emotional, but the male's lack of emotion adds to his masculine mystique. Passivity, neatness, cleanliness and popularity are expected of the female in her endeavor to marry and bear children, while the male is free to grow both physically and intellectually. (2, 5, 11, 19) ". . . the whole socialization process is geared to discourage in girls any involvement and success in 'masculine' pursuits, that is, pursuits that require ambition, daring and inquisitiveness." (2:119)

Margaret Mead believed that it has been demonstrated that man's most important male-dominated traits are his need for "achievement," success and the ability to defeat others. (11) Often he

achieves these through his dominance over certain disciplines of learning, prestigious occupations or athletics. (2:5) In order to maintain this position of success, the male often finds himself fighting to keep the female out of his dominion. Thus, there is enormous resistance to women trying to enter fields such as science, business, medicine and law, as well as resistance to her participating in a male dominated sport such as horseracing or football. (4)

This resistance is further strengthened by laws such as the alimony laws of most states which assume "that women are close to helpless," (4:24) as well as by the opinions of males and female professionals in various occupations: an example of this is the belief of many college administrators that coeducational institutions are not in the best interest of the male student. (5:19) Coed colleges, in general, accept more males than females. Many physical educators feel that there should be a separate physical education program for young boys and girls as well as a distinct interscholastic program for each sex. (9:19)

Behaviorists such as Dr. Spock stated that "little girls . . . [should become]. . . women who would take so much satisfaction in motherhood that they would not be tempted into 'unconscious competition with their husbands'." (5:132) Other behaviorists indicate that if women are competing with males, it is merely a rejection of their femininity. (2, 13)

Man points to women as a biological inferior to further support his thesis of male superiority. (2:13) In all but a few animal

species males are the alphas or the leaders. They provide the food and protection; they are dominant. It is rare, as in the case of the hyenas, but never the primates, that the female of the species is larger than the male or dominant over him. (3) In an experiment with Ringdoves, for example, it was found that when the female "omega [lowest Ringdove in flock] was injected with the male hormone tostesterone. . . in eight days [it] rose to alpha. . . [thus showing that]. . . maleness seemed an undoubted determinant [in dominance]." (3:113)

Although the female is "restricted in more ways than boys, . . . [she is] nevertheless allowed more freedom than boys in opposite-sex role adoption." (39:129)

Myron Benton, in The American Male, shows the incongruity of allowing girls to play "boys'" games - Cowboys and Indians; - to play with "male" toys - guns, trains; - to wear "men's" clothing, while the male is not afforded the reciprocal privileges. (4) Quite the contrary, a boy who plays with dolls or plays house or wears female clothing is in danger of having his masculinity questioned. (44) Parents will allow deviation in the girl--tomboyishness--while they will discourage any "feminine behavior in their son." (44:90) Females "give less emphasis than boys to differences between the roles of boys and girls, . . . [although] there is some evidence that girls [are] less pleased than boys with their sex roles." (45:95)

Brown (26) and Connell (29) in studies concerning role identification and with concurrence with other psychological testers showed

that women preferred the male sex role, while men never preferred the female role. (4, 5, 18, 19)

Further, it was shown in Brown's study that the opposite role identification for girls increases as they progress in school grades from first to fourth.

Many reasons for these results have been postulated by the testers:

1. Male roles and their corresponding traits are rewarded more than female roles and their corresponding traits. (29)

2. Our culture is masculine centered and masculine oriented and offers the male many privileges and much prestige not accorded the female. (39:129)

3. There is more opportunity for better jobs, more opportunities if one is a male.

4. Boys are more likely to be punished than girls for adapting aspects of the opposite sex role. (39:130)

5. Girls are more subject to cultural pressures than are boys. (6:73)

6. 'Sex cleavage' becomes more pronounced as adolescences is reached. (2:39, 6:54)

Although the role of the male seems clear enough, he should never deviate from what society has labeled masculine - the feminine role is ambiguous. "She" may compete with boys, but never men or husbands. "She" may, at ten, outrun, outswim or outplay a boy, or even be more intelligent than him, but once she has reached puberty, she must reverse this trend. (39:3-4) Germaine Greer in <u>The Female Eunuch</u> summed up this phenomenon of female behavior after puberty this way:

> She may wear leather, as long as she cannot actually handle a motor bike; she may wear rubber, but it ought not to indicate that she is an expert diver or water skier. If she wears athletic clothes, the purpose is to underline her unathleticism. (9:56)

As indicative of the example Ms. Greer chose in showing the roles of mature women in our society, athletics is the bastion for the male and his masculinity. Lynne has hypothesized that "males tend to identify with a cultural stereotype of the masculine role," (39:130) and nowhere else does this cultural stereotype reappear more than in defining athletics and those males who participate in them.

In a Kagan and Moss study in 1929, they stated that "athletics competence is one of the trio of traits--courage, independence, and athletic prowness--that defines the cultures version of the ideal American male." (19:92)

Bryant Cratty, Margaret Meade and others all reiterate the ideology that maleness and athletics are intricately bound. (4, 6, 11, 19)

Tests performed by psychologists Terman and Miles in 1936 showed that college athletes received a higher masculinity score than non-athletes. (19)

The effect of athletics on the male and, therefore, the female has such far reaching consequences that Myron Benton summed up those effects as follows:

> The straight jacketing effect of athletics occurs when so much emphasis is placed on it as a masculine value that it has. . . a distorting effect on the men

> who participate in it and a distorting effect on society's view of men who do not; when to put it another way, the emphasis placed on athletics has a skewing effect on other values. (4:60)

As long as athletics and maleness are so intrically bound, the female who engages in athletics can do so if she has been willing to treat athletics simply as a "leisure time activity, something she engages in for fun," (4:60) while the male treats sports as a battleground to prove his masculinity. (4:19) It is only when the woman takes the game seriously that she runs the risk of losing later in life a "meaningful social relationship with men." (30:28)

Women who do participate, therefore, have to choose their sports wisely as some sports seem to be "more masculine" than others. In a study done by Sexton using a masculinity scale from the California Psychological Inventory, he had boys who ranked "most masculine" and those ranked "least masculine" rate athletic sports. His results showed that for most sports with the exception of tennis, bowling and volleyball, the masculine boys rated sports higher than the least masculine boys. The individual sports of swimming and track and field were rated the highest by the most masculine boys with 61 percent and 47 percent in favor of those sports, respectively. The least masculine boys rated the individual sports of bowling and swimming their highest with percentages of 43 percent and 36 percent. Tennis and golf were ranked very low by both groups (13 percent and 14 percent) while ranked highly by girls and high achievers in school. (19)

Obviously, a girl competing in a less masculine sport, tennis, golf, volleyball or bowling, would not be taking as much a chance of being labeled masculine.

Sexton further stated that to "avoid feminization," the team sport seems the "most advanced, organized and popular form of boy games." (19:119)

Other sports, according to Metheny, are also socially acceptable by the nature of the particular characteristics of the sport. She listed the traits of socially sanctioned and non-sanctioned sports for females as follows:

Generally acceptable: sports which

1. emphasize aesthetics and grace,
2. use light objects as compared to heavy ones: this could be either to project the object or to overcome its resistance,
3. send body through space for a short or moderate distance,
4. exhibit strength but only when controlling some type of movement,
5. in face-to-face competition no body contact or very little contact should occur. (12)

Not acceptable: those sports in which individuals

1. resist heavy objects - either to project or lift them,
2. project body into space for great distance or for a long period of time,
3. in face-to-face competition contact body of opponent. (12)

The advent of women's liberation has permitted many women to hope to compete in a man's world not only in occupational areas, but in sports. "Although women who seriously engaged in sports a generation ago were rare," stated Charles Winich in The New People,

"many now regularly compete in squash, handball and other formerly male sports." (24:125)

Need for competition and a possible change in social acceptance has fostered this increase of females in athletics. (12) With the general increase in the popularity of such sports as golf and tennis, there has also been an increase in the number of women players of these sports. Similarly, other sports even those which have been classified as dangerous are being participated in by women. (24)

Women are not simply engaging in sports for the enjoyment either, but for the thrill of competition as well. A study by McGee in 1956 concerning the desirability of women to compete on an interschool basis has shown that on the whole only "administrators and teachers. . . were less favorable to intensive competition [for women] than were parents and coaches." (40:60)

In a Harres study in 1968, she found that both the male and female subjects were slightly favorable towards the desirability of women and girls competing in athletic competition. (37)

In this era of change for the American women, there has been an increased desire on the part of some females to participate against males in athletic contests. The New York State Education Department conducted a two-year study which involved one hundred New York upstate high schools in an experiment which included girls on boys interscholastic teams in non-contact sports. All one hundred schools volunteered to be in the study. Although the results were

not published, the experiment was reportedly successful with favorable reports from male and female participants as well as coaches, teachers and administrators. (47:48) In an interview with George Grover, State Director of Physical Education and Recreation for New York State, he reaffirmed the reports and added that the opinions of all concerned with the study were favorable for girls to compete on boys' teams if the girl was capable. He also stated that most of the individuals concerned felt that there should still be all-girl teams for females.

It is felt, though, that males have the advantage in most contests where a female competes against a male. In AAHPER's Philosophy and Standards for Girls and Women's Sports, it is stated:

> Although some women may be physiologically stronger than some men, research has shown that women will be at a physiological disadvantage in some areas of sports. . . (especially those) sports which depend largely upon strength, power and endurance. (54:16)

Metheny reported that in comparing the records of female golfers and swimmers to male records in those sports, nowhere have the women's records neared that of the male's. Although in some cases, as in tennis, no direct evidence exists as to the female's playing ability as compared to the male's; when we observe any game of mixed doubles in tennis (or in badminton), the man always has the dominant role as compared to the woman's sub-ordinate one. How much of this tendency is culturally oriented is not known. (12:18)

Physically, a man is purported to be superior in strength, muscular capacity, lung capacity, physical development and

endurance. (19) He has "broader shoulders, bigger chest, narrower hips, longer and straighter arms, and longer and straighter legs /which can make him/ better adapted for speed and mechanical efficiency than the /female/. . . ." (18:278)

Cratty (6) and Scheinfeld (18) stated that socially and culturally, the females have been given less time to develop their full potential in sports; they are offered less encouragement and are less physically active as children than the male. Whether the woman could reach a man's potential is not known. In those societies where there is a reversal in the roles of the sexes as with the Tchambolic tribes described by Margaret Mead, the men have not developed to their full potential but the women have. (11) Thus, one explanation for the women's superior strength is not simply their ability to reach this potential without societal restriction, but possibly because of the male's lack of ability to reach his.

For these reasons - incomparable strength and social undesirability - there are few athletic competitive situations where the male and female are pitted against each other.

The Division of Girls' and Women's Sports statement of policy directly stated that:

> We believe that girls should be prohibited from participating:
>
> 1. on a boy's intercollegiate or interscholastic team;
> 2. against a boy's intercollegiate or interscholastic team; and
> 3. against a boy in a scheduled intercollegiate or interscholastic contest.

In several areas throughout its Standards booklet, DGWS reiterates this belief of the unequal competitive situation which

would exist if a male and female directly competed. But it further states that this should not preclude the situation where mixed teams compete against one another in coeducational or corecreational activities and where there exists a separate set of rules governing these sports which generally do not include body contact. (54)

The entire state of New York is now defining an area of sports participation which indeed is contrary to the philosophy of the DGWS. The primary consideration of this change is how it will affect the male and his concept of his own masculinity.

Margaret Mead has stated that

> . . . maleness in America is not absolutely defined, it has to be kept and re-earned every day, and one essential element in the definition is beating women in every game that both sexes play, in every activity in which both sexes engage. (11:303)

Man needs to fulfill the stereotype that society has provided for the male: athletic, strong, superior to the female. (4, 6, 11, 19)

Women are refusing to cooperate and "conform to the stereotype," (4:155) Benton summed up, and that

> since his masculine identity is at least partly based on the validity of these stereotypes--since he confirms his maleness at least as much by what women aren't as by what men are--the whole thing is apt to have a fairly upsetting effect on him. (4:155)

There seems to be some validity in the thesis that man defines femininity and, therefore, masculinity by what men and women are permitted to do. (4, 5, 18, 30)

There is, though, increasing evidence that women can perform many of the activities that men have claimed to be masculine in nature.

John Paul Scott, a social scientist, claims that "evidence from the science of heredity is strongly against the conventional 'stereotypes' that all women are mild mannered and peaceable." (4:49) During war years and post-war years, women performed many of the jobs previously held only by men. (5) As to behavior and potential ability, "it has not been proven that women cannot be the equals of men. Nor that they will not - in a different social setting - aspire to become just that." (2, 18, 19)

The changes in roles, status, job opportunities, which are now occurring in America could perhaps bring about a marked change in the capacities of the female, and in the feelings of the male concerning those capacities.

It appears that children today are being raised similarly regardless of sex. Their parents have given up many of the stereotypes: men help with housework, laundry; women have jobs. (4:11) Men are viewing their masculinity in a less confining way.

> There is a new way to masculinity, a new concept of what it means to be a man. It has little to do with how strong the male is physically, how adept he is at ordering people around . . . or how closely he identifies with all other stereotyped attitudes and acts . . . . He has the choice of accepting the fact that he is becoming less hard and rough and that the female is becoming more competent and adventuresome as signs that the sexes are reversing roles or that both of them are becoming more civilized /emphasis author's/. (4:207)

Perhaps as man becomes more secure in his own role, less afraid of being an emotional, sensitive, esthetic being, free from the stereotypes of society, the woman will be set free from her bindings, and in doing so the man will free himself from his. (4)

Attitude and Attitude Measurement

Thurstone has defined an attitude as:

> . . . the sum total of a man's inclinations and feelings, prejudice or bias, preconceived notions, ideas, fears, threats, and convictions about any 'specified' topic. (51:531)

Although Thurstone's definition seems all inclusive, there are few behavioral scientists who will agree that his definition should be accepted universally or without modification.

Symonds (50), Droba (31) and Green (8) believed that attitudes relate to "generalized conduct" rather than specific conduct, although the attitude may reflect a specific concept.

Ferguson believed attitudes to be ". . . acceptance value of a belief [author's emphasis]." (34:665)

Marvin and Wright (20) stated that attitudes merely imply (author's emphasis) a relationship, while Droba firmly stated that attitudes are "true indicators of behavior [author's emphasis]." (20:454)

Edwards (7), Symonds (50) and Kirkpatrick (38) believed attitudes to be reflected by either a positive or negative feeling about a concept or an idea, while Shaw and Wright (20) and Oppenheim (15) further suggested that there must also be a neutral point, thus forming "a continuum from positive through neutral to negative." (20:7)

The most agreed upon idea concerning attitudes and attitudinal responses is the belief by most behavioral scientists that attitudes will show some type of readiness towards action.

Havighurst (10), Marvin and Wright (20) and Symonds (50) felt that attitudes are more of an "emotional" readiness towards action, while Allport (1) and Oppenheim (15) believe that attitudes show more of a "neuropsychic state of readiness for mental and physical activity [Allport's emphasis]." (1:799)

Other behaviorists, Remmers (17), Droba (31) and Vernon (23) agreed that in some way, either organically, physically or emotionally, an attitude will reflect the individuals "predisposition" towards some type of action reflecting that particular attitude.

Concurring, Marvin and Wright acknowledged that ". . . attitudes, rather than being overt responses, serve as predispositions to respond overtly [authors emphasis]." (20:4)

In measuring attitudes, one must be cognizant of the relationship between attitudes and opinions, as opinions are a "verbal expression of [an] attitude, " (51:531) and equally show a predisposition towards action. (31)

But whether or not someone who has an attitude about a topic and expresses his opinion reflecting that attitude will overtly act, exhibiting the attitude, cannot be effectively demonstrated. (34)

Thurstone adding to this ambiguity of attitudes and their measurement stated that:

> Neither [one's] opinions nor his overt acts constitute in any sense an infallible guide to the subjective inclinations and preferences that constitute [one's] attitude. (51:532)

Obviously, the best type of attitudinal assessment would be a controlled laboratory experiment where all of the variables could

be controlled or direct observation of an overt act. (15) But this type of measurement is not always possible to achieve in a limited period of time or with large groups of subjects.

In attitudinal measurement, therefore, it is apparent that no one method of measurement will be one hundred percent accurate. Some tests are, though, better adapted for attitude measurement than others based on the topic being investigated, the time available, or the number of subjects which are to be measured.

Semantic Differential

Edwards (7), Oppenheim (15), Kirkpatrick (38) and others have all defined attitudes as the relationship between opposite word response: positive or negative, favorable or unfavorable, liking or disliking or acceptance and rejection are just some of the polar words used to describe this relationship. Further, as previously suggested by Shaw and Wright (20) and Oppenheim (15), a neutral position is also necessary in attitude measurement.

The Semantic Differential is an attitude test procedure which uses polar words and a neutral position in determining attitudes. The Semantic Differential has been defined by Osgood and Succi as being the:

> . . . successive allocation of a concept to a point in the multidimensional semantic space by selection from among a set of given scaled semantic alternatives. (16:26)

The Semantic Differential involves three basic factors: evaluative, potency and activity. (4) Evaluative factors would be

exemplified by words such as good-bad, fair-unfair, or kind-cruel, potency factors by strong-weak, large-small, and activity factors by active-passive or fast-slow. (14)

Although as stated by Snider and Osgood (21) and Osgood and Succi (16), the evaluative factor is more potent than either the potency or activity factors. Mitsos (41), in a study, showed that overloading an attitude test in any of these three factors "does not appear to occur at the expense of distortion in the semantic field." (41:434)

The Semantic Differential being a rather new method compared to the traditional methods of attitude assessment--Likert or Thurstone--has nevertheless been used frequently for attitude measurement. (22)

Sommers (22), in demonstrating the value of the Semantic Differential (in attitude measurement), shows some of the advantages as follows:

1. ease of administration,
2. simple form allows use with many different concepts,
3. measures not only 'direction' of a reaction but the 'intensity' of that reaction.
4. . . . the most important contribution of the S.D. is the provision of a single attitude space for all stimuli; this permits analysis, comparisons and insights that /are/ virtually impossible with traditional instruments. (22:251)

As to comparability, validity, reliability and objectivity, Sommers (22) and Snider and Osgood (21) have stated the following:

1. Comparability: any number of concepts can be compared using one 'single standardized semantic framework'. (21:35)

2. Validity: semantic differential shows face validity as well as high correlation with traditional attitude scales such as Likert and Thurstone.

3. Reliability: in test-retest analysis of the Semantic Differential method, 'reliability coefficient was .85.' (21:34)

4. Objectivity: the Semantic Differential 'yields quantitative data which are presumably verifiable in the sense that other investigators can apply the same set of scales to equivalent subjects and obtain essentially the same results.' (21:34)

The Semantic Differential method must, though, be used carefully when dealing with sensitive topics as the results could be influenced by "social desirability" of the particular attitude. By giving "anonymity to /the/ respondents," this effect can be avoided. (22)

In comparing the Semantic Differential attitude test with other traditional scales, Sommers (22) found high correlations. In an attitude study concerning the concepts of Negro, church and capital punishment, the Semantic Differential, when compared to the Thurstone method, had a correlation of .74 - .82.

In an attitude test involving crop rotation, a Guttman scale as compared to the Semantic Differential had a correlation of .78. And in comparing the Likert method to the Semantic Differential in an attitude test involving politics, keeping informed, the correlation was .62. (22)

Although the Likert and Thurstone methods have been used with much effectiveness and efficiency in attitudinal measurement, the general criticism of those tests as compared to the Semantic Differential are as follows:

1. The Likert test lacks a neutral point and, therefore, no continuous scale can exist. (15)

2. Both the Thurstone and the Likert methods are time consuming, necessitating a test-retest format for reliability and an evaluation of each statement used to provide validity. (17:7)

3. The Thurstone method is often twice the time of the Likert, even though they correlate about the same. (33)

Considering all factors, reliability, validity, objectivity, ease of construction and administration, and lack of time consumption, it would appear that the Semantic Differential method is a desirable measurement device to use.

CHAPTER IV

PROCEDURES

The purpose of this study was to investigate the attitudes of selected high school boys towards girls playing on boys' interscholastic teams.

Subjects for this study were athletes who participated on non-contact sports interscholastic teams, and non-athletes from the New York City Public School system.

Selection of Test

For the purpose of this study a Semantic Differential Attitude Test was used as the investigative tool. The primary objective in selection of this method was ease of construction and administration:

1. The investigator can select the varied polar adjectives as well as the basic concepts based upon interest and purpose of investigator and study.

2. Polar adjectives selected can be chosen from a wide variety already in use or can be selected to reflect the language patterns of the group being tested.

3. No validation other than a pre-test is needed to obtain the final instrument.

4. The time of the test can be controlled to allow the investigator the freedom to increase or decrease it according to the convenience and comprehension ability of the group being tested.

The Semantic Differential test consists of a series of concepts with its corresponding set of descriptive scales: a pair of polar adjectives at opposite ends of a seven space scale.

CONCEPT A

Polar adjective X ___:___:___:___:___:___:___Polar adjective Y
1 2 3 4 5 6 7

The adjective indicates the subject's feelings about the concept, while the space indicates the intensity of that feeling:

Space 1 - extremely X
Space 2 - quite X
Space 3 - slightly X
Space 4 - neither X nor Y
either X or Y
(neutral position)
Space 7 - extremely Y
Space 6 - quite Y
Space 5 - slightly Y

Test Construction

A pre-test was constructed which consisted of ten concepts and 244 descriptive scales. Concepts selected were based on the nature of topic, background readings, a review of selected literature and suggestions from experienced physical educators. The concepts selected for the pre-test were as follows:

1. Beating male athletic opponent
2. Beating female athletic opponent
3. Loss to male athletic opponent
4. Loss to female athletic opponent
5. Female athlete
6. Male athlete

7. Female athletic teammate
8. Male athletic teammate
9. Female athletic opponent
10. Male athletic opponent

Polar adjectives were obtained from a list of adjectives used in other Semantic Differential tests (16) with the addition of selected adjectives frequently used in the vocabulary of the group being tested.

Polar adjectives for male and female paired concepts were the same. For the pre-test, the paired concepts were placed on the test paper so that they did not necessarily follow one another (see Appendix B for pre-test).

In order to ascertain the attitude of the pre-test group for the purposes of comparison, a final question was posed asking the subjects:

How would you rate your overall feeling towards girls playing on boys' interscholastic teams?

Strongly in favor ___:___:___:___:___:___:___ Strongly opposed
1 2 3 4 5 6 7

Subjects rating the final question in spaces 5, 6, or 7 were considered opposed to girls playing on boys' interscholastic teams or the Con group. Those rating the final question in spaces 1, 2 or 3 were considered in favor of having girls play on boys' interscholastic teams or the Pro group. Subjects ranking the question in space 4 were considered neutral. The total time for the pre-test was 45-50 minutes.

The pre-test was administered to sixty high school boys from the New York City Public High Schools. All of the boys were members of a non-contact sport belonging to one of the following interscholastic teams: tennis, golf, fencing, gymnastics, swimming, track, and bowling. None of the boys had had experience with girls in the interscholastic athletic setting.

Out of the total sample, twenty-two boys were in favor of girls being on boys' interscholastic teams and twenty-two were opposed. Sixteen subjects were eliminated from evaluation due to incomplete tests or a neutral position concerning girls competing on boys' teams.

For evaluative purposes the Pro group was separated from the Con group. Frequencies were tallied for each of the descriptive scales--each of the polar words and the neutral position. No differentiation was made among specific positions on the scale, e.g., strongly in favor compared to slightly in favor, other than their position to the right or to the left of the neutral position.

Chi Square was used to determine if there was any difference between the Pro and Con groups. The following table was set up for each of the 244 descriptive scales:

	+ word	- word	neutral
PRO			
CON			

Chi Square for a 3 x 2 grouping at the 5 percent level of confidence was 5.99146. Table I, page 33, shows the results of

TABLE I

ANALYSIS OF CHI SQUARE FOR
244 DESCRIPTIVE SCALES

Concept	Significant Polar Adjectives	$\overline{X}^2$
1. Male athletic opponent	None	
2. Loss to male athletic opponent	None	
3. Loss to female athletic opponent	None	
4. Beating female athletic opponent	None	
5. Beating male athletic opponent	Good - bad	7.485
	Happy - sad	6.666
6. Male athlete	Beneficial - harmful	6.106
	Successful - unsuccessful	8.112
	Cautious - rash	7.144
7. Male athletic teammate	Fair - unfair	6.400
	Bitter - sweet	6.862
	Kind - cruel	8.764
	Impossible - possible	3.834
8. Female athlete	Beneficial - harmful	8.704
	Important - unimportant	7.778
	Superior - inferior	9.521
	Aggressive - defensive	7.015
	Tough - fragile	8.239
	Strong - weak	9.196
	Skillful - spasticated	7.770
	Positive - negative	7.526
	Serious - humorous	5.904

TABLE I (continued)

Concept	Significant Polar Adjectives	$\bar{X}^2$
9. Female athletic teammate	Smoken - hurten	6.766
	Colorful - colorless	12.000
	Active - passive	11.032
	Strong - weak	6.400
	Successful - unsuccessful	11.530
	Right - wrong	7.778
	Positive - negative	8.376
	Good - bad	6.268
	Pleasant - unpleasant	11.218
	Beneficial - harmful	7.394
	Meaningful - meaningless	9.248
	Serious - humorous	11.028
	Skillful - spasticated	17.360
10. Female athletic opponent	Interesting - boring	7.734
	Successful - unsuccessful	6.956
	Right - wrong	10.888
	Positive - negative	8.000
	Good - bad	9.232
	Beneficial - harmful	7.394
	Meaningful - meaningless	10.494
	Important - unimportant	6.578
	Serious - humorous	15.418
	Skillful - spasticated	7.512
	Smoken - hurten	7.300

computing Chi Square for the 244 descriptive scales for each of the ten concepts.

Based on the results and analysis of the statistical evidence, the final test was constructed. From the pre-test of ten concepts and 244 descriptive scales, the final test consisted of three concepts and their corresponding descriptive scales as shown in Table I, page 33. The three concepts were those concerned with the female: female athlete, female athletic opponent and female athletic teammate.

Certain significant descriptive scales were eliminated. Most of those eliminated had large neutral frequencies showing ambiguity or neutrality. The remaining adjectives were eliminated due to possible cause for confusion since they dealt with male and would, therefore, have no relationship to the proposed purpose of this study. The male concepts had been included in the pre-test for purposes of comparison with the female counterpart.

Positive and negative adjectives were alternated and mixed arbitrarily throughout the final test to avoid establishing a particular pattern and to aid in having each subject read carefully each group of polar words.

The total time for the experimental test was reduced to 8-10 minutes. A direction and information sheet remained consistent to both the pre-test and the finalized test (see Appendix C). The information sheet contained the following:

1. Definitions necessary for understanding and answering questions and attitude test:

    a. athlete
    b. non-athlete
    c. non-contact sport
    d. interscholastics

2. Background information

    a. age
    b. grade
    c. number of siblings
    d. parental information

3. Information concerning interscholastic status

    a. athlete or non-athlete
    b. team participated on
    c. rank, if on a ranked sport (e.g., tennis)
    d. number of females on team: past and present
    e. if team competed against females
    f. if individual competed against a female
    g. if he won or lost

Selection of Subjects

Letters were mailed to 354 coaches from 78 New York City Public High Schools asking permission to use their team members for the attitude test. Criteria for selection of coaches was based solely upon the fact that the coach was associated with a non-contact sport for boys and coached the interscholastic team in that sport. No differentiation was acknowledged as to the general population of high schools used (academic, commercial, coed, etc.).

Of the 354 coaches contacted, 49 coaches from 37 schools said that their team would participate in the study. Thirty-eight coaches from thirty-one schools said they did not desire to participate in the study, and no responses were obtained from the remaining 267 coaches.

A follow-up letter containing a returnable postcard with selected dates and times for testing was sent to each of the forty-nine

interested coaches. Sixteen coaches sent back the postcard indicating a date and time for the test administration. Thirty-three coaches did not respond or decided that they could not participate in the study after all.

Administration of the Test

Dates and times were confirmed with each coach and his team. Where more than one team was from the same school, an effort was made to administer the test to them at the same time.

The test was administered at each school in all but four cases. These four teams were sent the test since a date and time convenient to the coach and tester was not available. In each of these cases, the coach received written instructions and he administered the test.

In administering the test, oral instructions were given to help clarify any questions on the information sheet or in the attitude test. An oral example of how each descriptive scale should be marked was given (see Appendix B).

Subjects were asked not to place their names on the test paper. Stress was placed on the fact that each boy should react to the descriptive scales for each concept as they affected him. In many cases the boys were told they would have to project as a particular concept may not have been applicable to their existing situation.

The test was administered to sixteen teams consisting of 259 athletes and to ninety-seven non-athletes from Bayside High School, a New York City Public School located in Queens, New York.

Thirty-four tests were eliminated due to incomplete background information or incomplete test. The remaining subjects were divided into three major groups as follows:

Athletes - with experience participating with females in an interscholastic setting	118 subjects
Athletes - with no experience participating with females in an interscholastic setting	107 subjects
Non-athletes - not on an interscholastic team	97 subjects
Total number subjects	322 subjects

After administration of the test, each of the 322 tests was scored and analyzed.

Treatment of Data

Each descriptive scale was given a score from one to seven based upon where the subject placed his mark on the scale. Words rated positive in the pre-test by the Pro group received high ratings of five to seven, while words rated negative in the pre-test were rated from one to three. The neutral position was rated four so that a continuous scale from one through seven--from negative to positive--was obtained:

\+ word: 1 : 2 : 3 : 4 : 5 : 6 : 7 - word

After adding up the scores for each individual descriptive scale in each concept, four scores were obtained for each subject:

1. Score for female athletic opponent
2. Score for female athlete

3. Score for female athletic teammates
4. Total score for all three concepts

For purposes of comparison, scores were converted to T scores and the tests were divided into various groups for statistical analysis.

An analysis of variance was used to calculate between group and within group differences for each of the three concepts: female athletic opponent, female athlete and female athletic teammate; and each of the three major groups: athletes - experience, athletes - no experience, and non-athletes - control.

A further analysis of possible difference of the subjects related to age, interscholastic team, or inter-group experiences with respect to gender role was also calculated with the analysis of variance technique. A list of the raw scores used can be found in Appendix D.

CHAPTER V

ANALYSIS OF DATA

The purpose of this study was to investigate the attitudes of selected high school boys towards girls playing on boys' interscholastic teams.

Subjects for this study were athletes who participated on non-contact sports interscholastic teams and non-athletes from the New York City Public School system.

Analysis of Data

For each subject's attitude test, four scores were obtained:

1. score for concept: female athletic opponent
2. score for concept: female athlete
3. score for concept: female athletic teammate
4. total score for all three concepts.

For comparison purposes, the raw scores of the three concepts were converted to T-scores, since the number of descriptive scales in each concept was not equal.

In all comparisons using the total scores, the raw scores were used since all tests contained a total of thirty-three descriptive scales.

The statistical process of analysis of variance was used. Relationships significant at the 5 percent level of confidence

were accepted as the level at which the null hypotheses would be found untenable.

The F ratio for each analysis of variance technique used was determined by use of tables.

The Null Hypotheses investigated were as follows:

1. There is no difference in attitudes between male high school athletes who have had experience with female athletes in an interscholastic setting and male high school athletes who have not had experience with respect to female athletes playing on boys' interscholastic teams.

The hypothesis was found untenable at the 5 percent level of confidence. An F ratio of 34.97 was obtained using a three by three analysis of variance. A Scheffé test was performed between the high school male athletes with experience and those without experience and the difference of the means was greater than the results of the Scheffé. Results of this test can be found in Table II, page 42.

2. There is no difference in attitude between male high school athletes and non-athletes with respect to the concept of female athletes playing on boys' interscholastic teams.

The hypothesis was found untenable at the 5 percent level of confidence. An F ratio of 34.97 was obtained using a three by three analysis of variance. A Scheffé test performed between non-athletes and athletes with experience, and non-athletes and athletes with no experience with girls in an interscholastic setting, showed that there was a difference between the groups. Results can be found in Table II, page 42.

TABLE II

DIFFERENCES FOUND AMONG HIGH SCHOOL BOYS WITH RESPECT TO INTERPRETATION OF FEMALE ATHLETE

Source	Ss	Df	$\bar{X}^2$	F
Ss between: Athletes-experience Athletes-none Non-athletes	368.60	2	184.3	34.97*
Ss within: Female opponent Female athlete Female teammate	4,159.69	2	2,079.84	394.65*
Interaction	45.73	4	11.43	2.16
Residual	5,052.81	957	5.27	

Test	Difference in Means	S
Athletes-experience -- Non-athlete	1.51	.4255*
Athletes-experience -- Athlete-none	.85	.4150*
Athlete-none -- Non-athlete	.66	.4359*
Female teammate -- Female athlete	5.07	.4255*
Female opponent -- Female athlete	2.83	.4255*
Female teammate -- Female opponent	2.24	.4255*

*Significant at .05 percent level of confidence.

3. There is no difference in male high school athletes and non-athletes attitudes with respect to the following:
   a. female athletic opponent
   b. female athlete
   c. female athletic teammate

The hypothesis was found untenable at the 5 percent level of confidence for all three areas. An F ratio of 394.65 was obtained using a three by three analysis of variance. The Scheffé test showed a significant difference between the means of each of the three concepts. Results can be found in Table II, page 42.

For the following hypotheses, the raw scores were used since analysis was calculated on total scores. The 5 percent level of confidence was accepted as the level at which the hypotheses would be found untenable.

4. There is no difference in attitudes of male high school athletes with respect to age groups regarding the idea of female athletes playing on boys' interscholastic teams. The age groups were:
   a. 14-15 years
   b. 16 years
   c. 17 years
   d. 18 years

The null hypothesis was found tenable. See Table III, page 44 for the results of the analysis.

5. There is no difference in the attitude of high school male athletes who represent different non-contact sports with respect to female athletes playing on boys' interscholastic teams. Non-contact sports were:
   a. swimming
   b. gymnastics
   c. fencing
   d. bowling
   e. tennis
   f. track

The null hypothesis was accepted as tenable. Table IV, page 45 demonstrates the results of the analysis.

TABLE III

DIFFERENCES FOUND AMONG HIGH SCHOOL BOYS OF VARIOUS AGES WITH RESPECT TO INTERPRETATION OF FEMALE ATHLETE

	14-15 Years	16 Years	17 Years	18 Years
Raw score mean	156.05	162.73	160.78	167.9
Number of subjects	59	68	66	32

Source	Ss	Df	$\bar{X}^2$	F
Ss between	3,174.33	3	1,058.11	1.47
Ss within	158,245.83	221	716.04	

TABLE IV

DIFFERENCES FOUND AMONG HIGH SCHOOL BOYS OF VARIOUS AGES WITH RESPECT TO INTERPRETATION OF FEMALE ATHLETE

	Track	Swimming	Gymnastics	Fencing	Bowling	Tennis
Raw score mean	158.14	168.38	155	167.47	168.83	157.62
Subjects	95	44	16	21	24	49

Source	Ss	Df	$\bar{X}^2$	F
Ss between	6,848.67	5	1,369.73	2.0
Ss within	166,169.49	243	683.82	

6. There is no difference in attitude of male high school athletes who have had specific playing experiences towards females playing on boys' interscholastic teams:
   a. female athletes on their team
   b. played against female athletes
   c. had both female athletes on team and played against them
   d. lost to female athlete in athletic contest
   e. defeated female athlete in athletic contest

The null hypothesis was accepted as tenable. The results of the analysis can be found in Table V, page 47.

The final hypothesis stated:

7. High school boys are not in favor of having girls on their interscholastic teams:
   a. high school male athletes with experience with female athletes in an interscholastic setting are not in favor of having girls on their interscholastic teams.

   b. high school male athletes with no experience with female athletes in an interscholastic situation are not in favor of having females play on boys' interscholastic teams.

   c. high school male non-athletes are not in favor of having girls play on boys' interscholastic teams.

The raw score means were calculated for the three major groups: male athletes with experience with female athletes in an interscholastic setting; male athletes with no experience; non-athletes; as well as the mean for all of the subjects in the study.

A table was set up using the score value for each space (1 - 7) multiplied by the number of descriptive scales per test--33. Thus a range of 33 to 231 could be obtained for each test. The mean between each consecutive space was calculated and added to the total score for that space giving the final results as shown in Table VI, page 48.

TABLE V

DIFFERENCES FOUND AMONG HIGH SCHOOL BOYS OF VARIOUS PLAYING EXPERIENCE WITH GIRLS IN AN INTERSCHOLASTIC SETTING WITH RESPECT TO INTERPRETATION OF FEMALE ATHLETES

	Female on Team	Played Female	Female on Team and Played Female	Lost to Female	Defeated Female
Raw score mean	171.66	171.42	161.05	181.83	166.6
Subjects	9	35	18	6	10

Source	Ss	Df	$\bar{X}^2$	F
Ss between	2,447.61	4	611.9	1.11
Ss within	40,064.77	73	548.83	

TABLE VI

EVALUATION TABLE FOR ATTITUDE TEST

Scores Rangings	Evaluation
33 to 49	Extremely opposed to girls playing on boys teams
50 to 82	Moderately opposed
83 to 115	Slightly opposed
116 to 148	Neutral
149 to 181	Slightly in favor
182 to 204	Moderately in favor
205 to 231	Extremely in favor

	Raw Score Mean	Subjects
Athletes - experience	167.11	118
Athletes - no experience	154.57	107
Non-athletes	144.31	97
Total	156.08	322

The null hypothesis was found untenable for all of the groups. Each group, with the exception of the non-athlete, had scores slightly in favor of having girls play on boys' interscholastic teams. The high school male non-athletes were neutral in their attitude regarding girls playing on boys' interscholastic teams. See Table VI, page 48 for the statistical display of the results.

CHAPTER VI

INTERPRETATION OF DATA

The purpose of this study was to investigate the attitudes of selected high school boys towards girls playing on boys' interscholastic athletic teams.

Subjects for this study were athletes, who participated on non-contact sport interscholastic teams, and non-athletes from the New York City Public School system.

Interpretation of Data

Seven null hypotheses were investigated with the following interpretation and explanations:

1. Male high school athletes are more favorable towards girls competing on boys' interscholastic teams than male high school non-athletes.

Both the male athletes with some type of previous experience with female athletes in an interscholastic setting and male athletes with no previous experience were favorable to the idea of girls playing on boys' interscholastic teams. The boys with previous experience were the most favorable of the three groups, thus leading the investigator to suggest two possible explanations:

a. Athletes as compared to non-athletes have a common bond--sport--which seems to unite them regardless of their sex; and

b. That the more experience a male athlete has with a female athlete in an interscholastic setting, the more favorable his attitude will be towards her.

2. Female teammates are regarded more favorably by male athletes and non-athletes than female opponents or female athletes, respectively.

This finding seems to indicate that the type of relationship, rather than the sex of those involved, might be a determining factor in the attitudes of the participants in this study.

Some relationships were stronger than others: "teammate," the most favorable, dealt with athletes who play together and with whom there is interdependence, thus whether male or female, the need to depend is still there; "opponents," dealt with competitors for whom it is possible to develop a healthy sense of respect regardless of sex; finally, the female "athlete" or any athlete (which was the least favorable of the three relationships), has no specific relationship to other athletes until he or she becomes either a teammate or opponent, thereby providing that relationship.

3. Age of the male high school athlete makes no difference with respect to attitudes towards girls playing on boys' interscholastic teams.

The investigator discovered that age was not an important index for attitude measurement in this study. Although the age span was five years, 14 - 18 years of age, all of the participants were members of the sub-culture of high school students which might be one reason for their similarity in attitudes.

4. There is no relationship between the particular non-contact sport on participates in and his attitude regarding female athletes playing on boys' teams.

In the six non-contact sports analyzed - track, swimming, gymnastics, fencing, bowling and tennis - there was no difference

in male attitude concerning the desirability of girls playing on boys' interscholastic teams.

The investigator believes that the fact that each of these sports were non-contact, requiring individual effort in most cases, has great bearing on the congruent attitudes of the members of each sport.

5. Male athletes who have had experience with female athletes in an interscholastic setting all maintain favorable attitudes towards girls playing on boys' interscholastic teams, regardless of the distinct type of experience the athlete had.

Although several different experiences were available to the athlete--females on their team, only; females on their team as well as playing against females; competed against females, only; were defeated by females; or defeated females--all of the athletes tested were slightly in favor of having girls on boys' interscholastic teams with the exception of one group: those boys who were defeated by female athletes, they were moderately in favor of girls being on boys' teams. Of all the groups compared in this study, this is the only group moderately in favor of girls being on boys' teams. Perhaps the respect the female athletes earned in beating their male opponents can account for this more favorable attitude.

It is apparent, though, the investigator believes that in all cases the female seemed to be considered as just another teammate or opponent rather than a female teammate or female opponent, or perhaps in the excitement of heated competition, the sex of a teammate or opponent is not important.

6. High school male athletes were slightly in favor of having girls on boys' interscholastic teams.

7. High school male non-athletes were neutral in their position regarding girls playing on boys' interscholastic teams.

The investigator believes that the reason for the athletes feeling favorable about female participation, and the neutrality of the non-athletes is the relationship previously pointed out which disregards sex and accentuates those areas in which the male and female have a shared or common bond - sport.

CHAPTER VII

SUMMARY AND CONCLUSIONS

The purpose of this study was to investigate the attitudes of selected high school boys towards girls playing on boys' interscholastic teams.

Subjects for this study were athletes who participated on non-contact sport interscholastic teams and non-athletes from the New York City Public School system.

Summary

A Semantic Differential Attitude test was constructed and administered to high school male athletes and non-athletes from the New York City High School system.

Three main groups were compared: male athletes with experience with female athletes in an interscholastic setting; male athletes with no experience with female athletes in an interscholastic setting; and male non-athletes.

The group's attitude was ascertained concerning the desirability of having female athletes on male interscholastic teams according to their attitude scores on three major concepts: female athletic teammate; female athletic opponent; and female athlete.

For comparison purposes, raw scores were converted into T-scores where needed.

In all comparisons, the process of analysis of variance was used. Relationships significant at the 5 percent level of confidence were accepted as the level at which the null hypotheses would be found untenable.

Null hypotheses were formulated regarding relationships between groups and within groups concerning the variables to be measured.

Statistical analysis showed that the following null hypotheses investigated were found untenable at the 5 percent level of statistical confidence:

1. There is no difference in attitudes between male high school athletes who have had experience with female athletes in an interscholastic setting and male high school athletes who have not had experience with respect to female athletes playing on boys' interscholastic teams.

2. There is no difference in attitude between male high school athletes and non-athletes with respect to the concept of female athletes playing on boys' interscholastic teams.

3. There is no difference in male high school athletes and non-athletes attitudes with respect to the following:
    a. female athletic opponent
    b. female athletic teammate
    c. female athlete

Statistical analysis indicated that the following null hypotheses investigated were found tenable;

4. There is no difference in attitudes of male high school athletes with respect to age groups regarding the idea of female athletes playing on boys' interscholastic teams. The age groups were:
    a. 14-15 years
    b. 16 years
    c. 17 years
    d. 18 years

5. There is no difference in the attitude of high school male athletes who represent different non-contact sports with respect to female athletes playing on boys' interscholastic teams. Non-contact sports were:
   a. swimming
   b. gymnastics
   c. bowling
   d. tennis
   e. fencing
   f. track

6. There is no difference in attitude of male high school athletes who have had specific playing experiences towards females playing on boys' interscholastic teams:
   a. female athletes on their teams
   b. played against female athletes
   c. had both female athletes on team and played against them
   d. lost to female athlete in athletic contest
   e. defeated female athlete in athletic contest

The following null hypothesis investigated was found untenable by evaluating a table calculated for the Semantic Differential test:

7. High school boys are not in favor of having girls on their interscholastic teams:
   a. high school male athletes with experience with female athletes in an interscholastic setting are not in favor of having girls on their interscholastic teams.
   b. high school male athletes with no experience with female athletes in an interscholastic situation are not in favor of having females play on boys' interscholastic teams.
   c. high school male non-athletes are not in favor of having girls play on boys' interscholastic teams.

Conclusions

Based on the analysis of data, with regard to background reading, statistical evidence lends support to the investigator's following conclusions:

1. Male high school athletes as compared to male non-athletes are more favorable towards girls competing on boys' interscholastic teams.

2. Female teammates are regarded more favorably by male athletes and non-athletes than female opponents or female athletes, respectively.

3. Age makes no difference with respect to attitude of male high school athletes towards girls playing on boys' interscholastic teams.

4. There is no relationship between the particular non-contact sport one participates in and his attitude regarding female athletes playing on boys teams.

5. Male athletes with experience with female athletes in an interscholastic situation all maintain favorable attitudes towards girls playing on boys' interscholastic teams, regardless of the distinct type of experience the athlete had.

6. High school male athletes were slightly in favor of having girls on boys' interscholastic teams.

7. High school male non-athletes were neutral in their position regarding girls playing on boys' interscholastic teams.

Along with the specific conclusions, the following explanations were also discerned:

1. The more experience a male athlete has with a female athlete in an interscholastic situation, the more favorable he is inclined to be about having females on boys' interscholastic teams.

2. Athletes as compared to non-athletes have a common bond--sport--which seems to unite them regardless of their sex.

3. The type of relationship--teammate or opponent--rather than the sex of the individual seems to be a determining factor in favorability of female athletes, female teammates or female opponents.

4. Being a member of the same sub-cultural group--male high school athletes--was more important than age in

determining desirability of having girls on boys' interscholastic teams.

5. Sports which are alike in make-up, such as non-contact sports, have a bearing on the attitude of the participants in those sports as to whether girls should participate on boys teams.

The investigator believes that the statistical results of the attitude test suggest a definite positive attitude of male high school athletes towards the concept of having girls participate on boys' interscholastic teams.

Although this attitude is only slightly favorable, it nevertheless indicated that another dimension of sport does exist and perhaps a new type of coeducational participation could develop in the future. Such participation would insist on equal opportunities and responsibilities for both sexes in the context of the rules.

CHAPTER VIII

CRITIQUE AND SUGGESTIONS FOR FURTHER STUDY

The purpose of this study was to investigate the attitudes of selected high school boys towards girls playing on boys' interscholastic teams.

Subjects for this study were athletes who participated in non-contact sport interscholastic teams and non-athletes from the New York City Public School system.

Critique and Suggestions for Further Study

Most studies, regardless of how efficiently the investigator has worked, how effective were his tools or how sincere his efforts, will be liable to limitations. Any study, which by the nature of the topic involves attitudes and attitude testing, will find itself in a precarious position.

Behavior is not an exact science. Attitudes which predict behavior are, therefore, also subject to scrutiny.

Attitude tests equally have their major faults. The Semantic Differential Test used in this study was constructed and administered using pre-test face validity. Other attitude tests, even those most commonly used and endorsed, use subjective ratings to help determine validity.

Thus, the tool, the attitude test, although quite valid, is not an "exact" measurement device.

The subjects used in this study were only a small sampling of the entire population and were restricted not only by size, but by location. Because of the necessity to administer the test personally, the investigator found that it was not feasible to include other groups.

It is with the knowledge of the limitations of this study and the hopes that it has provided incentive to others that the investigator offers the following suggestions for further study:

1. Attitudes of high school boys in school systems other than New York City.
2. Attitudes of high school girls concerning their feelings about participating on boys teams.
3. Societal attitudes concerning females playing on male teams or against males.
4. The ability of females to compete on a comparable basis with males: high school level, college level, and in professional sports.
5. The behavioral characteristics of girls who try out for male teams or who are on them.
6. The attitudinal change sponsored by a male defeating a female or being defeated by her.

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APPENDIXES

APPENDIX A

Samples of Correspondence

Bayside High School
Corporal Kennedy St. & 32 nd Ave.
Bayside, N. Y. 11361

Dear Coach,

In 1969, Dr. George Grover, New York State Director of Physical Education, conducted an experiment in the upstate schools which studied girls playing on boy's interscholastic teams.

Following the study, Dr. Harvey Scribner ruled that girls could play on boy's interscholastic teams throughout New York State, including New York City.

As a graduate student at the University of North Carolina, Greensboro, I am writing my thesis on the attitudes of boys concerning their feelings about girls as their teammates and as their opponents.

In order to make this study as meaningful as possible, I need very much to illicit your help.

I would like to administer an attitude test to your interscholastic players which would deal with their attitudes concerning girls playing on boy's interscholastic teams. The total time for the test is estimated at 15 minutes and would hopefully be administered to all of the interscholastic players of your school at the same time.

The actual test would not be administered until late May and early June to allow for the completion of most or all of your scheduled games and would be at a time and date convenient to you and your fellow coaches as well as your team members.

I have spoken to Eddie Michaels, President of the Coaches' Association who has stated that the Association would be very interested in the results of such a study.

I sincerely hope that you will participate in this study and help us all better understand a vital area of concern in student behavior.

I have enclosed a postcard for your convenience in which you can indicate your desire to participate in this study.

Thank you for all of your time and consideration in this matter.

Sincerely yours,

Charlene Jaffie

cc: Chairman

Bayside High School
Corporal Kennedy St. & 32nd Ave.
Bayside, N. Y. 11361

Dear Coach,

Thank you for consenting to have your team participate in my attitude study concerning girls playing on Boys' Interscholastic Teams.

As stated in my first letter, the entire attitude test will take approximately 15 minutes. It will be administered to your male players by myself or a trained assistant at a time and date convenient to you and your players.

Enclosed is a postcard which has a list of dates which have been set aside for the administration of the test, and a space for you to put down the time you wish the test to be given. The time may be any time after 1:30 p.m. to allow for traveling to your school.

If these specific dates conflict in any way with your schedule, please write down that date and time which will best accommodate you.

As soon as I have received your date and time selection, I will call to make any final arrangements for the administration of the attitude test.

Thank you once again for your cooperation and interest in this vital area of student behavior.

Sincerely yours,

Charlene Jaffie

SAMPLE OF RETURN POSTCARDS

School:_____

Coach: _____

Team: _____No. boys_____ No girls ____

_____Our team would like to participate in the attitude study.

_____We HAVE played against teams with female players.

_____We HAVE NEVER played against teams with female players.

School _____ Phone No. _____

Coach _____ Team _____

Place the time next to the date you would like to have the attitude test administered (choose one alternate date also):

May 15	_____ p.m.	June 1	_____ p.m.
May 18	_____ p.m.	June 2	_____ p.m.
May 22	_____ p.m.	June 5	_____ p.m.
May 25	_____ p.m.	June 6	_____ p.m.
May 26	_____ p.m.	June 12	_____ p.m.
May 30	_____ p.m.	June 13	_____ p.m.

The following date and time is more convenient for me:

_____ at _____ p.m.

APPENDIX B

Pre-Test

ORAL DIRECTIONS FOR SEMANTIC DIFFERENTIAL
ATTITUDE TEST

You are about to take an attitude test concerning your feelings about girls playing on boys' interscholastic teams.

You have each received a booklet containing the test and other vital information.

We will fill out the information sheet first:

1. Do not put your name on this test anywhere.

2. Read all definitions carefully.

3. Now: answer the background information. Pause
   ANY QUESTIONS?

4. Now: answer the questions concerning your own interscholastic experience. Pause
   ANY QUESTIONS?

Please look up when finished. Turn to the directions and read them carefully. Pause: Are there any questions?

(An oral example of how to answer the Semantic Differential attitude test is usually given at this point.)

1. Each concept (there are three) must be scored for each of the adjectives.

2. In all cases, answer with the choice you feel is best according to how YOU feel.

3. The closer the X is to the word, the stronger you feel about that adjective, as shown in the example.

4. Please make sure you only have one X for each pair of adjectives.

IF THERE ARE NO FURTHER QUESTIONS, PLEASE BEGIN.

THANK YOU FOR YOUR COOPERATION.

PART A INFORMATION SHEET

DIRECTIONS: Please use the following definitions in answering the questions on Part A and in considering your choice of answers on Part B. Please answer *ALL* questions in both parts.

Definitions:

ATHLETE: Has participated in at least *ONE* interscholastic sport on the high school level (grades 10-12).

NON-ATHLETE: Has not participated in any interscholastic sport on the high school level.

NON-CONTACT SPORT: Sport in which little if any contact occurs between the bodies of the opposing players due to the nature or the rules of the sport.

INTERSCHOLASTICS: Series of scheduled games with like teams consisting of groups of players who have been trained or coached.

BACKROUND INFORMATION:

Age _____ Grade _____ No. of Sisters _____ No. of Brothers _____
Mother Living? _____ Father Living? _____

Answer the following concerning interscholastics:

1. Do you consider yourself:
   Athlete ☐ Non-athlete ☐

2. Which non-contact interscholastic team do you participate on:
   Tennis ☐ Golf ☐ Bowling ☐ Gymnastics ☐
   Fencing ☐ Swimming ☐ Track ☐ None ☐
   Other _____ (include any contact team also)

3. If you are a member of a ranked sport (e.g. tennis, golf), what is your rank?_____

4. How many female members are there presently on your team?_____

5. If a ranked sport, what are their ranks?_____;_____

6. How many females heve been on your team other than the present season?_____

7. Has your team ever competed against another interscholastic team which has had a female player on it?
   Yes ☐ No ☐

8. If yes, did *YOU* ever play against a female from that team?
   Yes ☐ No ☐

9. Did you win or lose?
   Win ☐ Lose ☐

PLEASE TURN TO PART B

PART B CONCEPTS

DIRECTIONS: The purpose of this study is to measure the meaning of certain things to various people by having you judge them against a series of descriptive scales. In taking this test, please make your judgements on the basis of what these things mean to you. On the following pages you will find several different concepts to be judged and beneath each concept will be a set of scales. You are to rate the concepts on each of the scales.

Here is how to use the scales:

If you consider the concept to be *VERY CLOSELY* related to one end of the scale, check as follows:

Fair _X_ : ____ : ____ : ____ : ____ : ____ : ____ Unfair *OR*
Fair ____ : ____ : ____ : ____ : ____ : ____ : _X_ Unfair

If you consider the concept to be *QUITE CLOSELY* related to one end of the scale (but not extremely), check as follows:

Fair ____ : _X_ : ____ : ____ : ____ : ____ : ____ Unfair *OR*
Fair ____ : ____ : ____ : ____ : ____ : _X_ : ____ Unfair

If you consider the concept to be only *SLIGHTLY* related to one end of the scale, check as follows:

Fair ____ : ____ : _X_ : ____ : ____ : ____ : ____ Unfair *OR*
Fair ____ : ____ : ____ : ____ : _X_ : ____ : ____ Unfair

If you consider the concept to be *NEUTRAL* on the scale, or if the scale is completely *IRRELEVANT* (unrelated to the concept), check as follows:

Fair ____ : ____ : ____ : _X_ : ____ : ____ : ____ Unfair

REMEMBER:

1. Place the X in the middle of the space:
   _X_ : ____ (This) ____X____ (Not this)
2. Check every scale for each concept.
3. Never put more than one X mark on a single scale.
4. Do not look back or try to remember what you put down for similar items.
5. Work at fairly high speed throughout this test.
6. Use your first impressions (feelings) about the items; but do not be careless. We want your *TRUE* impressions.

BEATING MALE ATHLETIC OPPONENT

impossible	___	___	___	___	___	___	___ possible
excitable	___	___	___	___	___	___	___ calm
successful	___	___	___	___	___	___	___ unsuccessful
right	___	___	___	___	___	___	___ wrong
positive	___	___	___	___	___	___	___ negative
good	___	___	___	___	___	___	___ bad
bitter	___	___	___	___	___	___	___ sweet
kind	___	___	___	___	___	___	___ cruel
fair	___	___	___	___	___	___	___ unfair
pleasant	___	___	___	___	___	___	___ unpleasant
beneficial	___	___	___	___	___	___	___ harmful
happy	___	___	___	___	___	___	___ sad
friendly	___	___	___	___	___	___	___ unfriendly
infrequent	___	___	___	___	___	___	___ frequent
usual	___	___	___	___	___	___	___ unusual
pleasant	___	___	___	___	___	___	___ painful
elevated	___	___	___	___	___	___	___ depressed
meaningful	___	___	___	___	___	___	___ meaningless
important	___	___	___	___	___	___	___ unimportant

BEATING FEMALE ATHLETIC OPPONENT

impossible	___	___	___	___	___	___	___ possible
excitable	___	___	___	___	___	___	___ calm
successful	___	___	___	___	___	___	___ unsuccessful
right	___	___	___	___	___	___	___ wrong
positive	___	___	___	___	___	___	___ negative
good	___	___	___	___	___	___	___ bad
bitter	___	___	___	___	___	___	___ sweet
kind	___	___	___	___	___	___	___ cruel
fair	___	___	___	___	___	___	___ unfair
pleasant	___	___	___	___	___	___	___ unpleasant
beneficial	___	___	___	___	___	___	___ harmful
happy	___	___	___	___	___	___	___ sad
friendly	___	___	___	___	___	___	___ unfriendly
infrequent	___	___	___	___	___	___	___ frequent
usual	___	___	___	___	___	___	___ unusual
pleasant	___	___	___	___	___	___	___ painful
elevated	___	___	___	___	___	___	___ depressed
meaningful	___	___	___	___	___	___	___ meaningless
important	___	___	___	___	___	___	___ unimportant

competitive	: : : : : :	cooperative
impossible	: : : : : :	possible
interesting	: : : : : :	boring
aggressive	: : : : : :	defensive
colorful	: : : : : :	colorless
active	: : : : : :	passive
excitable	: : : : : :	calm
rational	: : : : : :	intuitive
cautious	: : : : : :	rash
tough	: : : : : :	fragile
strong	: : : : : :	weak
domineering	: : : : : :	lax
skillful	: : : : : :	spasticated
masculine	: : : : : :	feminine
successful	: : : : : :	unsuccessful
right	: : : : : :	wrong
positive	: : : : : :	negative
good	: : : : : :	bad
superior	: : : : : :	inferior
smoken	: : : : : :	hurten
beneficial	: : : : : :	harmful
important	: : : : : :	unimportant
serious	: : : : : :	humorous

LOSS TO MALE ATHLETIC OPPONENT

impossible	: : : : : :	possible
excitable	: : : : : :	calm
successful	: : : : : :	unsuccessful
right	: : : : : :	wrong
positive	: : : : : :	negative
good	: : : : : :	bad
bitter	: : : : : :	sweet
kind	: : : : : :	cruel
fair	: : : : : :	unfair
pleasant	: : : : : :	unpleasant
beneficial	: : : : : :	harmful
happy	: : : : : :	sad
friendly	: : : : : :	unfriendly
infrequent	: : : : : :	frequent
usual	: : : : : :	unusual
pleasant	: : : : : :	painful
elevated	: : : : : :	depressed
meaningful	: : : : : :	meaningless
important	: : : : : :	unimportant

Turn Page

MALE ATHLETIC OPPONENT

competitive	____	____	____	____	____	____	____ cooperative
interesting	____	____	____	____	____	____	____ boring
aggressive	____	____	____	____	____	____	____ defensive
impossible	____	____	____	____	____	____	____ possible
colorful	____	____	____	____	____	____	____ colorless
active	____	____	____	____	____	____	____ passive
excitable	____	____	____	____	____	____	____ calm
rational	____	____	____	____	____	____	____ intuitive
cautious	____	____	____	____	____	____	____ rash
tough	____	____	____	____	____	____	____ fragile
strong	____	____	____	____	____	____	____ weak
domineering	____	____	____	____	____	____	____ lax
masculine	____	____	____	____	____	____	____ feminine
successful	____	____	____	____	____	____	____ unsuccessful
right	____	____	____	____	____	____	____ wrong
positive	____	____	____	____	____	____	____ negative
good	____	____	____	____	____	____	____ bad
superior	____	____	____	____	____	____	____ inferior
bitter	____	____	____	____	____	____	____ sweet
kind	____	____	____	____	____	____	____ cruel
unpleasant	____	____	____	____	____	____	____ pleasant
fair	____	____	____	____	____	____	____ unfair
beneficial	____	____	____	____	____	____	____ harmful
friendly	____	____	____	____	____	____	____ unfriendly
pleasant	____	____	____	____	____	____	____ painful
meaningful	____	____	____	____	____	____	____ meaningless
important	____	____	____	____	____	____	____ unimportant
serious	____	____	____	____	____	____	____ humorous
skillful	____	____	____	____	____	____	____ spasticated
smoken	____	____	____	____	____	____	____ hurten

FEMALE ATHLETIC TEAMMATE

competitive	____	____	____	____	____	____	____ cooperative
interesting	____	____	____	____	____	____	____ boring
aggressive	____	____	____	____	____	____	____ defensive
impossible	____	____	____	____	____	____	____ possible
colorful	____	____	____	____	____	____	____ colorless
active	____	____	____	____	____	____	____ passive
excitable	____	____	____	____	____	____	____ calm
rational	____	____	____	____	____	____	____ intuitive
cautious	____	____	____	____	____	____	____ rash
tough	____	____	____	____	____	____	____ fragile
strong	____	____	____	____	____	____	____ weak

cont.

FEMALE ATHLETIC TEAMMATE (cont.)

domineering	: : : : : :	lax
masculine	: : : : : :	feminine
successful	: : : : : :	unsuccessful
right	: : : : : :	wrong
positive	: : : : : :	negative
good	: : : : : :	bad
superior	: : : : : :	inferior
bitter	: : : : : :	sweet
kind	: : : : : :	cruel
pleasant	: : : : : :	unpleasant
fair	: : : : : :	unfair
beneficial	: : : : : :	harmful
happy	: : : : : :	sad
friendly	: : : : : :	unfriendly
pleasant	: : : : : :	painful
meaningful	: : : : : :	meaningless
important	: : : : : :	unimportant
serious	: : : : : :	humorous
skillful	: : : : : :	spasticated
smoken	: : : : : :	hurten

FEMALE ATHLETIC OPPONENT

competitive	: : : : : :	cooperative
interesting	: : : : : :	boring
aggressive	: : : : : :	defensive
impossible	: : : : : :	possible
colorful	: : : : : :	colorless
active	: : : : : :	passive
excitable	: : : : : :	calm
rational	: : : : : :	intuitive
cautious	: : : : : :	rash
tough	: : : : : :	fragile
strong	: : : : : :	weak
domineering	: : : : : :	lax
masculine	: : : : : :	feminine
successful	: : : : : :	unsuccessful
right	: : : : : :	wrong
positive	: : : : : :	negative
good	: : : : : :	bad
superior	: : : : : :	inferior
bitter	: : : : : :	sweet

cont.
Turn Page

FEMALE ATHLETIC OPPONENT (cont.)

kind	___	___	___	___	___	___	___ cruel
unpleasant	___	___	___	___	___	___	___ pleasant
fair	___	___	___	___	___	___	___ unfair
beneficial	___	___	___	___	___	___	___ harmful
friendly	___	___	___	___	___	___	___ unfriendly
pleasant	___	___	___	___	___	___	___ painful
meaningful	___	___	___	___	___	___	___ meaningless
important	___	___	___	___	___	___	___ unimportant
serious	___	___	___	___	___	___	___ humorous
skillful	___	___	___	___	___	___	___ spasticated
smoken	___	___	___	___	___	___	___ hurten

MALE ATHLETIC TEAMMATE

competitive	___	___	___	___	___	___	___ cooperative
interesting	___	___	___	___	___	___	___ boring
aggressive	___	___	___	___	___	___	___ defensive
impossible	___	___	___	___	___	___	___ possible
colorful	___	___	___	___	___	___	___ colorless
active	___	___	___	___	___	___	___ passive
excitable	___	___	___	___	___	___	___ calm
rational	___	___	___	___	___	___	___ intuitive
cautious	___	___	___	___	___	___	___ rash
tough	___	___	___	___	___	___	___ fragile
strong	___	___	___	___	___	___	___ weak
domineering	___	___	___	___	___	___	___ lax
masculine	___	___	___	___	___	___	___ feminine
successful	___	___	___	___	___	___	___ unsuccessful
right	___	___	___	___	___	___	___ wrong
positive	___	___	___	___	___	___	___ negative
good	___	___	___	___	___	___	___ bad
superior	___	___	___	___	___	___	___ inferior
bitter	___	___	___	___	___	___	___ sweet
kind	___	___	___	___	___	___	___ cruel
fair	___	___	___	___	___	___	___ unfair
pleasant	___	___	___	___	___	___	___ unpleasant
beneficial	___	___	___	___	___	___	___ harmful
happy	___	___	___	___	___	___	___ sad
friendly	___	___	___	___	___	___	___ unfriendly
pleasant	___	___	___	___	___	___	___ painful
meaningful	___	___	___	___	___	___	___ meaningless
important	___	___	___	___	___	___	___ unimportant
serious	___	___	___	___	___	___	___ humorous
skillful	___	___	___	___	___	___	___ spasticated
smoken	___	___	___	___	___	___	___ hurten

MALE ATHLETE

competitive	: : : : : :	cooperative
impossible	: : : : : :	possible
interesting	: : : : : :	boring
aggressive	: : : : : :	defensive
colorful	: : : : : :	colorless
active	: : : : : :	passive
excitable	: : : : : :	calm
rational	: : : : : :	intuitive
cautious	: : : : : :	rash
tough	: : : : : :	fragile
strong	: : : : : :	weak
domineering	: : : : : :	lax
skillful	: : : : : :	spasticated
masculine	: : : : : :	feminine
successful	: : : : : :	unsuccessful
right	: : : : : :	wrong
positive	: : : : : :	negative
good	: : : : : :	bad
superior	: : : : : :	inferior
smoken	: : : : : :	hurten
beneficial	: : : : : :	harmful
important	: : : : : :	unimportant
serious	: : : : : :	humorous

LOSS TO FEMALE ATHLETIC OPPONENT

impossible	: : : : : :	possible
excitable	: : : : : :	calm
successful	: : : : : :	unsuccessful
right	: : : : : :	wrong
positive	: : : : : :	negative
good	: : : : : :	bad
bitter	: : : : : :	sweet
kind	: : : : : :	cruel
fair	: : : : : :	unfair
pleasant	: : : : : :	unpleasant
beneficial	: : : : : :	harmful
happy	: : : : : :	sad
friendly	: : : : : :	unfriendly
infrequent	: : : : : :	frequent
usual	: : : : : :	unusual
pleasant	: : : : : :	painful
elevated	: : : : : :	depressed
meaningful	: : : : : :	meaningless
important	: : : : : :	unimportant

TURN TO LAST PAGE

PLEASE ANSWER THE LAST QUESTION CAREFULLY:

HOW WOULD YOU RATE YOUR OVERALL FEELING TOWARDS GIRLS PLAYING ON BOYS' INTERSCHOLASTIC TEAMS?

strongly in favor ____ : ____ : ____ : ____ : ____ : ____ : ____ strongly opposed

THANK YOU FOR YOUR COOPERATION

APPENDIX C

Final Test

PART A INFORMATION SHEET

DIRECTIONS: Please use the following definitions in answering the questions on Part A and in considering your choice of answers on Part B. Please answer *ALL* questions in both parts.

Definitions:

ATHLETE: Has participated in at least *ONE* interscholastic sport on the high school level (grades 10-12).

NON-ATHLETE: Has not participated in any interscholastic sport on the high school level.

NON-CONTACT SPORT: Sport in which little if any contact occurs between the bodies of the opposing players due to the nature or the rules of the sport.

INTERSCHOLASTICS: Series of scheduled games with like teams consisting of groups of players who have been trained or coached.

BACKROUND INFORMATION:

Age _____ Grade _____ No. of Sisters _____ No. of Brothers _____
Mother Living? _____ Father Living? _____

Answer the following concerning interscholastics:

1. Do you consider yourself:
   Athlete ☐ Non-athlete ☐

2. Which non-contact interscholastic team do you participate on:
   Tennis ☐ Golf ☐ Bowling ☐ Gymnastics ☐
   Fencing ☐ Swimming ☐ Track ☐ None ☐
   Other _____ (include any contact team also)

3. If you are a member of a ranked sport (e.g. tennis, golf), what is your rank?_____

4. How many female members are there presently on your team?_____

5. If a ranked sport, what are their ranks?_____ ; _____

6. How many females have been on your team other than the present season?_____

7. Has your team ever competed against another interscholastic team which has had a female player on it?
   Yes ☐ No ☐

8. If yes, did *YOU* ever play against a female from that team?
   Yes ☐ No ☐

9. Did you win or lose?
   Win ☐ Lose ☐

PLEASE TURN TO PART B

PART B CONCEPTS

DIRECTIONS: The purpose of this study is to measure the meaning of certain things to various people by having you judge them against a series of descriptive scales. In taking this test, please make your judgements on the basis of what these things mean to you. On the following pages you will find several different concepts to be judged and beneath each concept will be a set of scales. You are to rate the concepts on each of the scales.

Here is how to use the scales:

If you consider the concept to be *VERY CLOSELY* related to one end of the scale, check as follows:

Fair X : ___ : ___ : ___ : ___ : ___ : ___ Unfair *OR*
Fair ___ : ___ : ___ : ___ : ___ : ___ : X Unfair

If you consider the concept to be *QUITE CLOSELY* related to one end of the scale (but not extremely), check as follows:

Fair ___ : X : ___ : ___ : ___ : ___ : ___ Unfair *OR*
Fair ___ : ___ : ___ : ___ : ___ : X : ___ Unfair

If you consider the concept to be only *SLIGHTLY* related to one end of the scale, check as follows:

Fair ___ : ___ : X : ___ : ___ : ___ : ___ Unfair *OR*
Fair ___ : ___ : ___ : ___ : X : ___ : ___ Unfair

If you consider the concept to be *NEUTRAL* on the scale, or if the scale is completely *IRRELEVANT* (unrelated to the concept), check as follows:

Fair ___ : ___ : ___ : X : ___ : ___ : ___ Unfair

REMEMBER:

1. Place the X in the middle of the space:
   X : ___ (This) ___X___ (Not this)
2. Check every scale for each concept.
3. Never put more than one X mark on a single scale.
4. Do not look back or try to remember what you put down for similar items.
5. Work at fairly high speed throughout this test.
6. Use your first impressions (feelings) about the items; but do not be careless. We want your *TRUE* impressions.

FEMALE ATHLETIC OPPONENT

interesting	____ : ____ : ____ : ____ : ____ : ____ : ____	boring
successful	____ : ____ : ____ : ____ : ____ : ____ : ____	unsuccessful
wrong	____ : ____ : ____ : ____ : ____ : ____ : ____	right
positive	____ : ____ : ____ : ____ : ____ : ____ : ____	negative
bad	____ : ____ : ____ : ____ : ____ : ____ : ____	good
harmful	____ : ____ : ____ : ____ : ____ : ____ : ____	beneficial
meaningless	____ : ____ : ____ : ____ : ____ : ____ : ____	meaningful
important	____ : ____ : ____ : ____ : ____ : ____ : ____	unimportant
humorous	____ : ____ : ____ : ____ : ____ : ____ : ____	serious
skillful	____ : ____ : ____ : ____ : ____ : ____ : ____	spasticated
smoken	____ : ____ : ____ : ____ : ____ : ____ : ____	hurten

FEMALE ATHLETE

beneficial	____ : ____ : ____ : ____ : ____ : ____ : ____	harmful
important	____ : ____ : ____ : ____ : ____ : ____ : ____	unimportant
inferior	____ : ____ : ____ : ____ : ____ : ____ : ____	superior
agressive	____ : ____ : ____ : ____ : ____ : ____ : ____	defensive
fragile	____ : ____ : ____ : ____ : ____ : ____ : ____	tough
strong	____ : ____ : ____ : ____ : ____ : ____ : ____	weak
spasticated	____ : ____ : ____ : ____ : ____ : ____ : ____	skillful
negative	____ : ____ : ____ : ____ : ____ : ____ : ____	positive
serious	____ : ____ : ____ : ____ : ____ : ____ : ____	humorous

FEMALE ATHLETIC TEAMMATE

smoken	____ : ____ : ____ : ____ : ____ : ____ : ____	hurten
colorless	____ : ____ : ____ : ____ : ____ : ____ : ____	colorful
passive	____ : ____ : ____ : ____ : ____ : ____ : ____	active
weak	____ : ____ : ____ : ____ : ____ : ____ : ____	strong
successful	____ : ____ : ____ : ____ : ____ : ____ : ____	unsuccessful
wrong	____ : ____ : ____ : ____ : ____ : ____ : ____	right
positive	____ : ____ : ____ : ____ : ____ : ____ : ____	negative
bad	____ : ____ : ____ : ____ : ____ : ____ : ____	good
pleasant	____ : ____ : ____ : ____ : ____ : ____ : ____	unpleasant
beneficial	____ : ____ : ____ : ____ : ____ : ____ : ____	harmful
meaningful	____ : ____ : ____ : ____ : ____ : ____ : ____	meaningless
serious	____ : ____ : ____ : ____ : ____ : ____ : ____	humorous
spasticated	____ : ____ : ____ : ____ : ____ : ____ : ____	skillful

THANK YOU FOR YOUR COOPERATION

APPENDIX D

Raw Data

TABLE VII

T-SCORES AND RAW SCORES OF MALE ATHLETES WITH EXPERIENCE WITH FEMALE ATHLETES IN AN INTERSCHOLASTIC SITUATION

Subject	Female Opponent Raw	Female Opponent T-Score	Female Teammate Raw	Female Teammate T-Score	Female Athlete Raw	Female Athlete T-Score
1	52	45	41	43	66	48
2	53	45	33	41	65	47
3	44	43	30	40	60	46
4	65	47	45	43	72	49
5	59	46	41	43	67	48
6	56	46	44	43	70	48
7	68	48	48	44	79	50
8	42	43	36	42	52	45
9	65	47	52	45	71	49
10	68	48	48	44	78	50
11	42	43	36	42	67	48
12	56	46	40	42	78	50
13	67	48	21	38	85	51
14	55	45	42	43	63	47
15	66	48	48	44	80	50
16	49	44	51	45	59	46
17	66	48	52	45	80	50
18	65	47	51	45	72	49
19	52	45	31	40	65	47
20	47	44	49	44	72	49
21	75	49	47	44	90	52
22	62	47	43	43	82	51
23	58	46	48	44	65	47
24	56	46	26	39	71	49
25	64	47	44	43	69	48
26	50	44	36	42	61	47
27	42	43	40	42	57	46
28	69	48	46	44	66	48
29	63	47	39	42	77	50
30	44	43	45	43	78	50
31	64	47	42	43	66	48
32	46	44	39	42	62	47
33	57	46	45	43	70	48
34	55	45	42	43	70	48
35	52	45	53	45	80	50

TABLE VII (continued)

Subject	Female Opponent Raw	Female Opponent T-Score	Female Teammate Raw	Female Teammate T-Score	Female Athlete Raw	Female Athlete T-Score
36	53	45	34	41	60	46
37	55	45	44	43	72	49
38	59	46	36	42	69	48
39	52	45	40	42	87	52
40	59	46	35	41	70	48
41	55	45	46	44	60	46
42	43	43	42	43	62	47
43	54	45	52	45	64	47
44	69	48	51	45	79	50
45	57	46	40	42	65	47
46	50	44	27	40	55	45
47	51	45	33	41	39	42
48	49	44	36	42	52	45
49	45	43	40	42	65	47
50	64	47	43	43	88	52
51	77	50	51	45	85	51
52	50	44	37	42	62	47
53	71	49	39	42	85	51
54	59	46	46	44	70	48
55	68	48	38	42	84	51
56	64	47	38	42	71	49
57	65	47	34	41	89	52
58	74	49	44	43	82	51
59	65	47	51	45	82	51
60	60	46	56	46	82	51
61	49	44	36	42	53	45
62	49	44	52	45	72	49
63	75	49	48	44	90	52
64	50	44	36	42	55	45
65	43	43	37	42	60	46
66	62	47	42	43	72	49
67	48	44	46	44	61	47
68	63	47	43	43	63	47
69	64	47	44	43	64	47
70	69	48	51	45	71	49

TABLE VII (Continued)

Subject	Female Opponent Raw	Female Opponent T-Score	Female Teammate Raw	Female Teammate T-Score	Female Athlete Raw	Female Athlete T-Score
71	32	41	35	41	49	44
72	43	43	34	41	56	46
73	58	46	36	42	67	48
74	52	45	37	42	69	48
75	51	45	41	43	63	47
76	62	47	44	43	78	50
77	52	45	31	40	58	46
78	71	49	52	45	90	52
79	62	47	42	43	69	48
80	69	48	47	44	83	51
81	55	45	46	44	70	48
82	51	45	41	43	63	47
83	60	46	42	43	76	50
84	50	44	23	39	60	46
85	53	45	36	42	58	46
86	18	38	17	38	59	46
87	52	45	35	41	60	46
88	45	43	33	41	61	47
89	61	47	42	43	68	48
90	63	47	42	43	69	48
91	48	44	34	41	55	45
92	56	46	43	43	77	50
93	59	46	42	43	74	49
94	46	44	33	41	77	50
95	46	44	31	40	47	44
96	51	45	37	42	69	48
97	60	46	39	42	62	47
98	61	47	25	39	66	48
99	53	45	45	43	69	48
100	74	49	51	45	87	52
101	67	48	49	44	74	49
102	71	49	54	45	82	51
103	60	46	56	46	77	50
104	51	45	38	42	66	48
105	47	44	40	42	59	46

TABLE VII (continued)

Subject	Female Opponent Raw	Female Opponent T-Score	Female Teammate Raw	Female Teammate T-Score	Female Athlete Raw	Female Athlete T-Score
106	70	48	57	46	85	51
107	37	42	28	40	67	48
108	55	45	41	43	71	49
109	44	43	36	42	52	45
110	53	45	52	45	59	46
111	50	44	25	39	61	47
112	55	45	51	45	76	50
113	61	47	50	44	74	49
114	62	47	42	43	59	46
115	63	47	49	44	83	51
116	67	48	42	43	75	49
117	55	45	45	43	70	48
118	66	48	41	43	59	46

TABLE VIII

T-SCORES AND RAW SCORES OF MALE ATHLETES WITH NO EXPERIENCE WITH FEMALE ATHLETES IN INTERSCHOLASTIC SITUATION

Subject	Female Opponent Raw	Female Opponent T-Score	Female Teammate Raw	Female Teammate T-Score	Female Athlete Raw	Female Athlete T-Score
1	44	43	33	41	51	45
2	38	42	24	39	48	44
3	46	44	40	42	76	50
4	51	45	39	42	53	45
5	55	45	45	43	69	48
6	49	44	25	39	68	48
7	65	47	35	41	64	47
8	63	47	52	45	70	48
9	56	46	43	43	66	48
10	62	47	45	43	68	48
11	45	43	33	41	79	50
12	51	45	26	39	62	47
13	48	44	33	41	40	42
14	52	45	38	42	62	47
15	61	47	43	43	83	51
16	47	44	37	42	73	49
17	56	46	37	42	78	50
18	53	45	28	40	39	42
19	41	43	25	39	51	45
20	45	43	39	42	60	46
21	48	44	35	41	49	44
22	43	43	34	41	66	48
23	59	46	37	42	71	49
24	56	46	39	42	60	46
25	58	46	42	43	73	49
26	36	42	59	46	88	52
27	24	39	28	40	47	44
28	64	47	45	43	86	52
29	29	40	35	41	43	43
30	62	47	45	43	76	50
31	27	40	26	39	50	44
32	63	47	44	43	67	48
33	72	49	52	45	85	51
34	39	42	27	40	34	41
35	68	48	51	45	79	50

TABLE VIII (continued)

Subject	Female Opponent Raw	Female Opponent T-Score	Female Teammate Raw	Female Teammate T-Score	Female Athlete Raw	Female Athlete T-Score
36	48	44	38	42	56	46
37	51	45	38	42	60	46
38	60	46	48	44	79	50
39	69	48	50	44	91	53
40	56	46	43	43	66	48
41	23	39	38	42	59	46
42	48	44	41	43	65	47
43	72	49	53	45	80	50
44	49	44	48	44	79	50
45	57	46	41	43	59	46
46	75	49	57	46	76	50
47	58	46	47	44	78	50
48	71	49	45	43	80	50
49	62	47	30	40	66	48
50	57	46	33	41	65	47
51	55	46	42	43	58	41
52	50	44	34	41	62	47
53	61	47	36	42	59	46
54	52	45	36	42	62	47
55	55	45	41	43	69	48
56	61	47	48	44	75	49
57	57	46	42	43	68	48
58	43	43	24	39	53	45
59	61	47	27	40	67	48
60	53	45	46	44	59	46
61	55	45	46	44	83	51
62	47	44	41	43	50	44
63	57	46	29	40	61	47
64	54	45	35	41	68	48
65	42	43	35	41	67	48
66	50	44	38	42	64	47
67	40	42	31	40	72	49
68	50	44	38	42	61	47
69	41	43	31	40	72	49
70	44	43	39	42	65	48

TABLE VIII (continued)

Subject	Female Opponent Raw	Female Opponent T-Score	Female Teammate Raw	Female Teammate T-Score	Female Athlete Raw	Female Athlete T-Score
71	56	46	33	41	70	48
72	54	45	37	42	65	47
73	65	47	48	44	82	51
74	71	49	48	44	85	51
75	48	44	44	43	82	51
76	71	49	42	43	79	50
77	71	49	48	44	85	51
78	45	43	31	41	29	50
79	67	48	39	42	66	48
80	54	45	34	41	80	50
81	50	44	50	44	90	52
82	45	43	34	41	60	46
83	26	39	26	39	48	44
84	53	45	55	45	82	51
85	39	42	46	44	43	43
86	44	43	33	41	54	45
87	68	48	55	45	84	51
88	48	44	32	41	66	48
89	60	46	54	45	80	50
90	45	43	32	41	54	45
91	43	43	40	42	39	42
92	48	44	39	42	64	47
93	41	43	36	42	48	44
94	36	42	23	39	41	43
95	52	45	40	42	64	47
96	32	41	57	46	25	39
97	51	45	27	40	63	47
98	44	43	28	40	62	47
99	44	43	34	41	43	43
100	31	41	37	42	45	43
101	31	41	33	41	48	44
102	42	43	20	38	39	42
103	46	44	37	42	65	47
104	50	44	40	42	39	42
105	40	42	36	42	47	44
106	62	47	50	44	66	48
107	58	46	41	43	81	51

TABLE IX

T-SCORES AND RAW SCORES OF MALE NON-ATHLETES

Subject	Female Opponent Raw	Female Opponent T-Score	Female Teammate Raw	Female Teammate T-Score	Female Athlete Raw	Female Athlete T-Score
1	52	45	42	43	52	45
2	53	45	41	43	73	49
3	51	45	34	41	59	46
4	43	43	25	39	46	44
5	34	41	22	39	17	37
6	56	46	40	42	71	49
7	47	44	48	44	64	47
8	54	45	48	44	66	48
9	41	43	35	41	49	41
10	44	43	36	42	52	45
11	46	44	41	43	51	45
12	40	42	25	39	36	42
13	48	44	30	40	47	44
14	39	42	18	38	55	45
15	61	47	40	42	58	46
16	44	43	16	37	32	41
17	55	45	39	42	63	47
18	66	48	56	46	84	51
19	52	45	34	41	65	47
20	65	47	39	42	57	46
21	60	46	37	42	72	49
22	42	43	41	43	48	44
23	55	45	40	42	56	46
24	57	46	37	42	68	48
25	47	44	33	41	62	47
26	28	40	38	42	53	45
27	49	44	43	43	50	44
28	52	45	36	42	68	48
29	67	48	42	43	61	47
30	32	41	18	38	49	44
31	67	48	52	45	90	52
32	46	44	36	42	57	46
33	53	45	36	42	52	45
34	54	45	31	41	50	44
35	54	45	38	42	52	45

TABLE IX (continued)

Subject	Female Opponent Raw	Female Opponent T-Score	Female Teammate Raw	Female Teammate T-Score	Female Athlete Raw	Female Athlete T-Score
36	51	45	32	41	57	46
37	49	44	34	41	61	47
38	62	47	47	44	74	49
39	24	39	9	36	13	37
40	45	43	32	41	61	47
41	51	45	30	40	58	46
42	67	48	53	45	81	51
43	36	42	20	38	33	41
44	71	49	45	43	73	49
45	53	45	31	41	51	45
46	52	45	51	45	37	42
47	34	41	39	42	54	45
48	36	42	22	39	17	37
49	64	47	43	43	55	45
50	58	46	43	43	68	48
51	28	40	22	39	31	41
52	42	43	37	42	67	48
53	47	44	39	42	60	46
54	34	41	23	39	39	42
55	56	46	44	43	72	49
56	58	46	39	42	72	49
57	62	47	45	43	78	50
58	72	49	52	45	73	69
59	56	46	35	41	67	48
60	62	47	45	47	70	48
61	53	45	45	43	66	48
62	20	38	15	37	19	38
63	45	43	39	42	66	48
64	48	44	50	44	72	49
65	54	45	38	42	66	48
66	53	45	36	42	75	49
67	58	46	46	44	66	48
68	50	44	21	38	33	41
69	25	39	9	36	23	39
70	56	46	52	45	82	51

TABLE IX (continued)

Subject	Female Opponent Raw	Female Opponent T-Score	Female Teammate Raw	Female Teammate T-Score	Female Athlete Raw	Female Athlete T-Score
71	71	49	55	45	83	51
72	41	43	32	41	48	44
73	42	43	33	41	57	46
74	22	39	26	39	38	42
75	61	47	36	42	71	49
76	65	47	51	45	78	50
77	65	47	42	43	74	49
78	59	46	43	43	60	46
79	59	46	34	41	53	45
80	49	44	42	43	66	48
81	57	46	41	43	68	48
82	40	42	21	38	56	46
83	77	50	39	42	66	48
84	26	39	20	38	61	47
85	54	45	33	41	61	47
86	62	47	47	44	62	47
87	29	40	39	42	75	49
88	35	41	9	36	46	42
89	59	46	32	41	51	45
90	58	46	39	42	64	47
91	52	45	32	41	56	46
92	52	45	39	42	69	48
93	58	46	40	42	52	45
94	45	43	38	42	55	45
95	45	43	27	40	48	44
96	51	45	43	43	69	48
97	51	45	39	42	74	49

TABLE X

RAW SCORES OF ATHLETES
AGE COMPARISON

14 years	15 years	16 years	17 years	18 years
167	113	101	132	147
173	100	198	161	171
165	190	178	146	213
167	139	155	137	170
143	173	195	155	196
124	147	147	161	158
175	213	139	193	152
172	172	187	155	172
147	133	181	175	204
168	141	132	133	185
171	103	147	149	120
177	110	156	213	199
130	155	149	94	170
151	146	174	173	141
134	168	142	195	184
167	157	195	191	156
134	139	155	178	169
131	121	120	167	116
162	152	192	199	138
	144	185	198	129
	157	120	173	139
	147	157	188	191
	158	148	164	209
	157	155	122	198
	137	144	205	187
	141	256	100	210
	140	149	167	171
	176	165	125	143
	148	143	150	169
	179	184	114	164
	212	152	208	195
	173	184	146	107
	194	144	183	
	198	166	207	
	188	147	163	

TABLE X (continued)

14 years	15 years	16 years	17 years	18 years
	180	183	131	
	159	194	128	
	182	175	157	
	151	128	136	
	156	155	165	
		190	182	
		99	184	
		148	203	
		183	158	
		121	174	
		167	138	
		142	159	
		212	100	
		123	155	
		190	171	
		194	179	
		207	150	
		195	167	
		155	164	
		170	117	
		195	172	
		159	171	
		188	185	
		160	123	
		200	154	
		174	132	
		132	176	
		145	162	
		212	161	
		153	164	
		112	174	
		187		
		176		

TABLE XI

RAW SCORES OF ATHLETES - SPORT COMPARISON

Swimming	Gym-nastics	Fencing	Bowling	Tennis	Track	
167	165	205	152	132	141	167
171	175	110	172	175	138	184
212	164	170	128	143	140	182
150	103	166	163	156	176	134
190	107	184	185	167	158	155
185	183	167	182	124	155	151
207	139	184	136	155	169	159
169	171	165	168	157	120	120
213	147	150	204	157	172	142
195	181	156	192	161	191	180
173	139	146	174	139	165	210
178	185	155	203	171	116	123
199	162	155	195	121	187	149
101	164	158	159	139	133	129
171	141	196	174	152	213	148
176	154	183	156	164	142	198
155		208	147	187	173	121
195		157	147	171	138	134
178		164	172	157	100	209
133		162	143	147	198	114
147		176	169	171	167	156
94			195	172	150	181
195			164	110	139	185
213			172	143	101	141
149				195	172	154
195				117	179	100
175				144	147	125
190				167	177	151
173				185	153	122
188				179	171	131
200				164	187	194
167				161	212	146
132				147	168	207
193				170	148	131
155				199	188	128

TABLE XI (continued)

Swimming	Gym-nastics	Fencing	Bowling	Tennis	Track	
146				162	198	190
212				132	159	100
132				123	194	139
112				137	160	191
113				198	173	148
173				161	174	144
173				158	145	149
183				155	194	143
155				184	188	152
99				141	130	144
				147	195	157
				174	170	147
				137	195	
				176		

TABLE XII

RAW SCORES OF ATHLETES - DIFFERENT PLAYING EXPERIENCES WITH GIRLS

Female on Team, Only	Played Female Female on Team	Played Female Only	Defeated Female	Beat by Female
164	171	141	198	198
136	185	140	161	190
163	199	184	167	212
185	170	176	173	207
184	172	169	133	147
166	164	190	184	137
195	162	147	124	
170	161	173	175	
182	164	171	179	
	137	213	172	
	179	213		
	167	173		
	123	150		
	132	173		
	147	172		
	147	133		
	147	155		
	172	191		
		198		
		212		
		213		
		188		
		167		
		155		
		161		
		155		
		175		
		149		
		195		
		141		
		138		
		116		
		178		
		195		
		200		

TABLE XIII

COMPARISONS OF MEANS BETWEEN FEMALE ATHLETIC TEAMMATE, FEMALE ATHLETIC OPPONENT, FEMALE ATHLETE

	T-Score Means	Subject
Female athletic teammate	47.23	322
Female athletic opponent	44.99	322
Female athlete	42.16	322